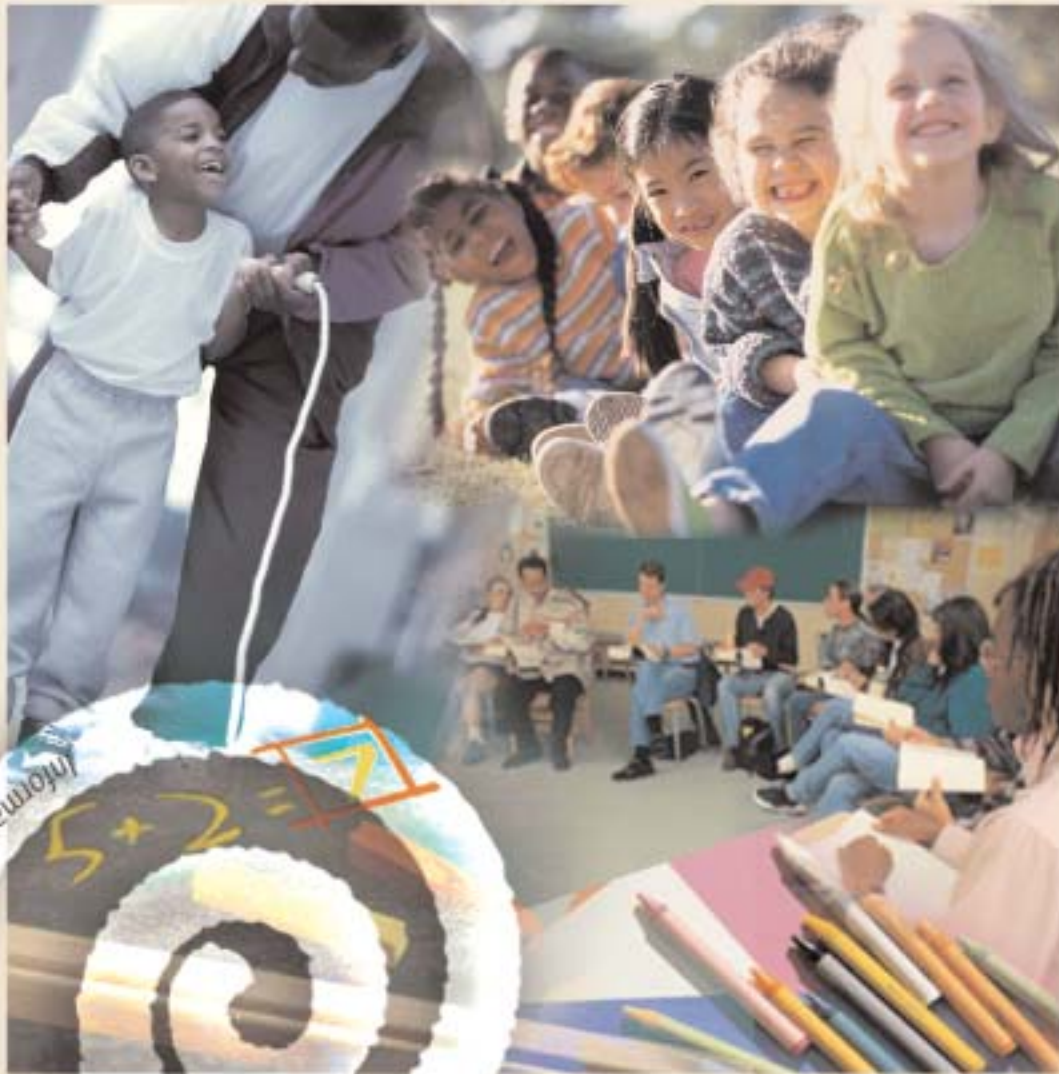


Children with Diabetes

RESOURCES

A Resource Guide for Wisconsin Schools and Families



Wisconsin Department of
Health and Family Services

The authors of this manual represent key organizations and individuals committed to improving diabetes care for children in schools throughout Wisconsin. The Program wishes to thank them for their collaboration, expertise, and perseverance regarding its development. We are also deeply grateful to the Diabetes Control Program of New York who so graciously shared the lessons learned and final products of their school manuals, Resource Guide for Families of Children with Diabetes and Resource Guide for Schools.

The information in this manual is general in nature, and does not constitute specific medical or legal advice. Readers should consult directly with medical professionals regarding specific questions about care of children with diabetes. Readers should consult with legal counsel regarding questions pertaining to the rights and/or responsibilities under state and federal law of any individual or institution receiving or providing care for children with diabetes.

This manual will be available on the Wisconsin Diabetes Control Program web site.

Future updates will also be placed on this web site.

www.dhfs.state.wi.us/health/diabetes/index.htm

The Children With Diabetes, A Resource Guide for Wisconsin Schools and Families is the product of extraordinary cooperation among diverse school professionals and organizations, health care providers, non profit organizations and public health staff.

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Care of Children with Diabetes

In the School and Day Care Settings

American Diabetes Association – Position Statement

Article reprinted with permission from:

Diabetes Care: The Journal of Clinical and Applied Research and Education. Vol 25:
Supplement 1, January 2002.



Care of Children With Diabetes in the School and Day Care Setting

AMERICAN DIABETES ASSOCIATION

Diabetes is one of the most common chronic diseases of childhood, with a prevalence of ~1.7 affected individuals per 1,000 people aged <20 years (1-4). In the U.S., ~13,000 new cases are diagnosed annually in children (4-7). There are about 125,000 individuals <19 years of age with diabetes in the U.S. (8). The majority of these young people attend school and/or some type of day care and need knowledgeable staff to provide a safe school environment (9-12). Both parents and the health care team should work together to provide school systems and day care providers with the information necessary to allow children with diabetes to participate fully and safely in the school experience.

DIABETES AND THE LAW

Federal laws that protect children with diabetes include Section 504 of the Rehabilitation Act of 1973, the Individuals with Disabilities Education Act of 1991 (originally the Education for All Handicapped Children Act of 1975), and the Americans with Disabilities Act. Under these laws, diabetes has been considered to be a disability, and it is illegal for schools and/or day care centers to discriminate against children with disabilities. In addition, any school that receives federal funding or any facility considered open to the public must reasonably accommodate the special needs of children with diabetes. Indeed, federal law requires an individualized assessment of any child with diabetes. The required accommodations should be provided within the child's usual school setting

with as little disruption to the school's and the child's routine as possible and allowing the child full participation in all school activities.

Despite these protections, children in the school and day care setting still face discrimination. For example, some day care centers may refuse admission to children with diabetes, and children in the classroom may not be provided the assistance necessary to monitor blood glucose and may be prohibited from eating needed snacks. The American Diabetes Association works to ensure the safe and fair treatment of children with diabetes in the school and day care setting (13-15).

Diabetes Care in Schools

Appropriate diabetes care in the school and day care setting is necessary for the child's immediate safety, long-term well being, and optimal academic performance. The Diabetes Control and Complications Trial showed a significant link between blood glucose control and the later development of diabetes complications, with improved glycemic control decreasing the risk of these complications (16,17). To achieve glycemic control, a child must monitor blood glucose frequently, follow a meal plan, and take medications. Insulin is usually taken in multiple daily injections or through an infusion pump. Crucial to achieving glycemic control is an understanding of the effects of physical activity, nutrition therapy, and insulin on blood glucose levels.

To facilitate the appropriate care of the student with diabetes, school and day care personnel must have an understand-

ing of diabetes and must be trained in its management and in the treatment of diabetes emergencies. Knowledgeable trained personnel are essential if the student is to avoid the immediate health risks of low blood glucose and to achieve the metabolic control required to decrease risks for later development of diabetes complications. Studies have shown that the majority of school personnel have an inadequate understanding of diabetes and that parents of children with diabetes lack confidence in their teachers' ability to manage diabetes effectively (12,18,19). Consequently, diabetes education must be targeted toward day care providers, teachers, and other school personnel who interact with the child, including school administrators, school coaches, school nurses, health aides, bus drivers, secretaries, etc.

The purpose of this position statement is to provide recommendations for the management of children with diabetes in the school and day care setting.

GENERAL GUIDELINES FOR THE CARE OF THE CHILD IN THE SCHOOL AND DAY CARE SETTING

I. Diabetes Health Care Plan

An individualized Diabetes Health Care Plan should be developed by the parent/guardian, the student's diabetes care team, and the school or day care provider. Inherent in this process are delineated responsibilities assumed by all parties, including the parent/guardian, the school personnel, and the student. These responsibilities are outlined in this position statement. The Diabetes Health Care Plan should address the specific needs of the child and provide specific instructions for each of the following:

1. Blood glucose monitoring, including the frequency and circumstances requiring testing.

The recommendations in this paper are based on the evidence reviewed in the following publications: Diabetes Control and Complications Trial Research Group: The effect of intensive treatment of diabetes on the development and progression of long-term complications in insulin-dependent diabetes mellitus. *N Engl J Med* 329:977-986, 1997; and Diabetes Control and Complications Trial Research Group: The effect of intensive diabetes treatment on the development and progression of long-term complications in adolescents with insulin-dependent diabetes mellitus. *J Pediatr* 125:177-188, 1994.

The initial draft of this paper was prepared by Georganna Klingenstein, MD, Patricia Kaufman, MD, Desmond Schatz, MD, and William Clarke, MD. The paper was peer-reviewed, modified, and approved by the Professional Practice Committee and the Executive Committee, November 1998. Most recent revised revision, 2000.

2. Insulin administration (if necessary), including doses/injection times prescribed for specific blood glucose values and the storage of insulin.
3. Meals and snacks, including food content, amounts, and timing.
4. Symptoms and treatment of hypoglycemia (low blood glucose), including the administration of glucagon if recommended by the student's treating physician.
5. Symptoms and treatment of hyperglycemia (high blood glucose).
6. Testing for ketones and appropriate actions to take for abnormal ketone levels, if requested by the student's health care provider.
3. Information about diabetes and the performance of diabetes-related tasks.
4. Emergency phone numbers for the parent/guardian and the diabetes care team so that the school can contact these individuals with diabetes-related questions and/or during emergencies.
5. Information about the student's meal/snack schedule. The parent should work with the school to coordinate this schedule with that of the other students as closely as possible. For young children, instructions should be given for when food is provided during school parties and other activities.
- B. The school or day care provider should provide the following:

Figure 1 includes a sample Diabetes Health Care Plan. For detailed information on the symptoms and treatment of hypoglycemia and hyperglycemia, refer to the *Medical Management of Type 1 Diabetes* (20). A brief description of diabetes targeted to school and day care personnel is included in the APPENDIX; it may be helpful to include this information as an introduction to the Diabetes Health Care Plan.

II. Responsibilities of the various care providers

- A. The parent/guardian should provide the school or day care provider with the following:
 1. All materials and equipment necessary for diabetes care tasks, including blood glucose testing, insulin administration (if needed), and urine or blood ketone testing. The parent/guardian is responsible for the maintenance of the blood glucose testing equipment (i.e., cleaning and performing controlled testing per the manufacturer's instructions) and must provide materials necessary to ensure proper disposal of materials. A separate logbook should be kept at school with the diabetes supplies for the staff or student to record test results; blood glucose values should be transmitted to the parent/guardian for review as often as requested.
 2. Supplies to treat hypoglycemia, including a source of glucose and a glucagon emergency kit, if indicated in the Diabetes Health Care Plan.
 3. Immediate accessibility to the treatment of hypoglycemia by a knowledgeable adult. The student should remain supervised until appropriate treatment has been administered, and the treatment should be available as close to where the student is as possible.
 4. An adult and back-up adult(s) trained to administer glucagon, in accordance with the student's Diabetes Health Care Plan.
 5. A location in the school to provide privacy during testing and insulin administration, if desired by the student and family, or permission for the student to check his or her blood glucose level and to take appropriate action to treat hypoglycemia in the classroom or anywhere the student

is in conjunction with a school activity, if indicated in the student's Diabetes Health Care Plan.

6. An adult and back-up adult(s) responsible for the student who will know the schedule of the student's meals and snacks and work with the parent/guardian to coordinate this schedule with that of the other students as closely as possible. This individual also will notify the parent/guardian in advance of any expected changes in the school schedule that affect the student's meal times or exercise routine. Young children should be reminded of snack times.
7. Permission for the student to see school medical personnel upon request.
8. Permission for the student to eat a snack anywhere, including the classroom or the school bus, if necessary to prevent or treat hypoglycemia.
9. Permission to miss school without consequences for required medical appointments to monitor the student's diabetes management. This should be an excused absence with a doctor's note, if required by usual school policy.
10. Permission for the student to use the restroom and have access to fluids (i.e., water) as necessary.
11. An appropriate location for insulin and/or glucagon storage, if necessary.

An adequate number of school personnel should be trained in the necessary diabetes procedures (e.g., blood glucose monitoring, insulin and glucagon administration) and in the appropriate response to high and low blood glucose levels to ensure that at least one adult is present to perform these procedures in a timely manner while the student is at school, on field trips, and during extracurricular activities or other school-sponsored events. These school personnel need not be health care professionals.

The student with diabetes should have immediate access to diabetes supplies at all times, with supervision as needed. Provisions similar to those described above must be available for field trips, extracurricular activities, other school-sponsored events, and on transportation provided by the school or day care facility to enable full participation in school activities.

It is the school's legal responsibility to

Diabetes Care Plan for _____ **(name of student)** **School** _____ **Effective Dates:** _____

To be completed by parents/health care team and reviewed with necessary school staff. Copies should be kept in student's classrooms and school records.

Date of Birth: _____ **Grade:** _____ **Homeroom Teacher:** _____

Contact Information:

Parent/guardian #1: _____ Address: _____
 Telephone - Home: _____ Work: _____ Cell Phone: _____

Parent/guardian #2: _____ Address: _____
 Telephone - Home: _____ Work: _____ Cell Phone: _____

Student's Doctor/Health Care Provider: _____ Telephone: _____
 Nurse Educator: _____ Telephone: _____

Other emergency contact: _____ Relationship: _____
 Telephone - Home: _____ Work: _____ Cell Phone: _____

Notify parent/guardian in the following situations: _____

Blood Glucose Monitoring

Target range for blood glucose: _____ mg/dl to _____ mg/dl Type of blood glucose meter student uses: _____

Usual times to test blood glucose: _____

Times to do extra tests (check all that apply): _____
 Before exercise _____ When student exhibits symptoms of hyperglycemia
 After exercise _____ When student exhibits symptoms of hypoglycemia
 Other (explain): _____

Can student perform own blood glucose tests? Yes No Exceptions: _____

School personnel trained to monitor blood glucose level and dates of training: _____

Insulin

Times, types, and dosages of insulin injections to be given during school:

Time	Type(s)	Dosage
_____	_____	_____
_____	_____	_____

School personnel trained to assist with insulin injection and dates of training: _____

Can student give own injections? Yes No

Can student determine correct amount of insulin? Yes No

Can student draw correct dose of insulin? Yes No

Meals and Snacks Eaten at School (The carbohydrate content of the food is important in maintaining a stable blood glucose level.)

Time	Food content/amount
Breakfast _____	_____
A.M. snack _____	_____
Lunch _____	_____
P.M. snack _____	_____
Dinner _____	_____
Snack before exercise? _____	_____
Yes No	
Snack after exercise? _____	_____
Yes No	

Other times to give snacks and content/amount: _____

A source of glucose, such as _____, should be readily available at all times.

Preferred snack foods: _____

Foods to avoid, if any: _____

Instructions for when food is provided to the class, e.g., as part of a class party or food sampling: _____

Hypoglycemia (Low Blood Sugar)

Usual symptoms of hypoglycemia: _____

Treatment of hypoglycemia: _____

School personnel trained to administer glucagon and dates of training: _____

Glucagon should be given if the student is unconscious, having a seizure (convulsion), or unable to swallow. If required, glucagon should be administered promptly and then 911 (or other emergency assistance) and parents should be called.

Exercise and Sports

A snack such as _____ should be readily available at the site of exercise or sports.

Restrictions on activity, if any: _____

Student should not exercise if blood glucose is below _____ mg/dl.

Supplies and Personnel

Location of supplies: Blood glucose monitoring equipment: _____ Insulin administration supplies: _____
 Glucagon emergency kit: _____ Ketone testing supplies: _____
 Snack foods: _____

Personnel trained in the symptoms and treatment of low and high blood sugar and dates of training: _____

Signatures

Reviewed by: [student's health provider/ doc] Acknowledged/received by: [guardian/doc] Acknowledged/received by: [school representative/date]

Figure 1—Diabetes Health Care Plan.

Table 1—Resources for teachers, child care providers, parents, and health professionals

- Children with Diabetes: Information for Teachers & Child-Care Providers*, Alexandria, VA, American Diabetes Association, 1999 (brochure); available online at www.diabetes.org/ada/teacher.asp.
- Your School & Your Rights: Protecting Children with Diabetes Against Discrimination in Schools and Day Care Centers*, Alexandria, VA, American Diabetes Association, 2000 (brochure); available online at www.diabetes.org/ada/scriights.asp.
- Your Child Has Type 1 Diabetes: What You Should Know*, Alexandria, VA, American Diabetes Association, 1999 (brochure); available online at www.diabetes.org/advocacy/type1.asp.
- Treating Diabetes Emergencies: What You Need to Know*, Alexandria, VA, American Diabetes Association, 1995 (video); 1-800-232-6733.
- Complete Guide to Diabetes*, Alexandria, VA, American Diabetes Association, 1999; 1-800-232-6733.
- Raising a Child with Diabetes: A Guide for Parents*, Alexandria, VA, American Diabetes Association, 2000; 1-800-232-6733.
- Clarke W "Advocating for the Child with Diabetes." *Diabetes Spectrum* 12:230-236, 1999.
- Education Discrimination Resources List*, Alexandria VA, American Diabetes Association, 2000.*
- Wisdom: A Kit of Wit and Wisdom for Kids with Diabetes (and their parents)*, Alexandria, VA, American Diabetes Association, 2000. Order information and select resources available at www.diabetes.org/wisdom.
- The Care of Children with Diabetes in Child Care and School Setting* (video); available from, Managed Design, Inc., P.O. Box 3067, Lawrence, KS 66046, (785) 842-9088.
- Frederickson L, Griff M: *Pumper in the School, Insulin Pump Guide for School Nurses, School Personnel and Parents*. MiniMed Professional Education, Your Clinical Coach, First Edition, May 2000. MiniMed, Inc., 1-800-440-7867.
- Tappon D, Parker M, Bailey W: *Easy As ABC, What You Need to Know About Children Using Insulin Pumps in School*. Disetronic Medical Systems, Inc., 1-800-280-7801.

*These documents are available in the American Diabetes Association's Education Discrimination Packet by calling 1-800-DIABETES.

provide appropriate training to school staff on diabetes-related tasks and in the treatment of diabetes emergencies. This training should be provided by health care professionals with expertise in diabetes unless the student's health care provider determines that the parent/guardian is able to provide the school personnel with sufficient oral and written information to allow the school to have a safe and appropriate environment for the child. If appropriate, members of the health care team should provide instruction and materials to the parent/guardian to facilitate the education of school staff. Educational materials from the American Diabetes Association and other sources targeted to school personnel and/or parents are available. Table 1 includes a listing of appropriate resources.

III. Expectations of the student in diabetes care

Children and youths should be able to implement their diabetes care at school with parental consent to the extent that is appropriate for the student's develop-

ment and his or her experience with diabetes. The extent of the student's ability to participate in diabetes care should be agreed upon by the school personnel, the parent/guardian, and the health care team, as necessary. The ages at which children are able to perform self-care tasks are very individual and variable, and a child's capabilities and willingness to provide self-care should be respected.

1. *Preschool and day care*. The preschool child is usually unable to perform diabetes tasks independently. By 4 years of age, children may be expected to generally cooperate in diabetes tasks.
2. *Elementary school*. The child should be expected to cooperate in all diabetes tasks at school. By age 8 years, most children are able to perform their own fingerstick blood glucose tests with supervision. By age 10, some children can administer insulin with supervision.
3. *Middle school or junior high school*. The student should be able to administer insulin with supervision and perform

self-monitoring of blood glucose under usual circumstances when not experiencing a low blood glucose level.

4. *High school*. The student should be able to perform self-monitoring of blood glucose under usual circumstances when not experiencing low blood glucose levels. In high school, adolescents should be able to administer insulin without supervision.

At all ages, individuals with diabetes may require help to perform a blood glucose test when the blood glucose is low. In addition, many individuals require a reminder to eat or drink during hypoglycemia and should not be left unsupervised until such treatment has taken place and the blood glucose value has returned to the normal range.

MONITORING BLOOD GLUCOSE IN THE CLASSROOM

It is best for a student with diabetes to obtain a blood glucose level and to respond to the results as quickly and conveniently as possible. This is important to avoid medical problems being worsened by a delay in testing/treatment and to minimize educational problems caused by missing instruction in the classroom. Accordingly, as stated earlier, a student should be permitted to monitor his or her blood glucose level and take appropriate action to treat hypoglycemia in the classroom or anywhere the student is in conjunction with a school activity, if preferred by the student and indicated in the student's Diabetes Health Care Plan. However, some students desire privacy during testing and this preference should also be accommodated.

In summary, with proper planning and the education and training of school personnel, children and youth with diabetes can fully participate in the school experience. To this end, the family, the health care team, and the school should work together to ensure a safe learning environment.

APPENDIX: BACKGROUND INFORMATION ON DIABETES FOR SCHOOL PERSONNEL

Diabetes is a serious, chronic disease that impairs the body's ability to use food. Insulin, a hormone produced by the pancreas, helps the body convert food into energy. In people with

diabetes, either the pancreas does not make insulin or the body cannot use insulin properly. Without insulin, the body's main energy source—glucose—cannot be used as fuel. Rather, glucose builds up in the blood. Over many years, high blood glucose levels can cause damage to the eyes, kidneys, nerves, heart, and blood vessels.

The majority of schooled youth with diabetes have type 1 diabetes. People with type 1 diabetes do not produce insulin and must receive insulin through either injections or an insulin pump. Insulin taken in this manner does not cure diabetes and may cause the student's blood glucose level to become dangerously low. Type 2 diabetes, the most common form of the disease typically afflicting obese adults, has been shown to be increasing in youth (21). This may be due to the increase in obesity and decrease in physical activity in young people. Students with type 2 diabetes may be able to control their disease through diet and exercise alone or may require oral medications and/or insulin injections. All people with type 1 and type 2 diabetes must carefully balance food, medications, and activity level to keep blood glucose levels as close to normal as possible.

Low blood glucose (hypoglycemia) is the most common immediate health problem for students with diabetes. It occurs when the body gets too much insulin, too little food, a delayed meal, or more than the usual amount of exercise. Symptoms of mild to moderate hypoglycemia include tremors, sweating, lightheadedness, irritability, confusion, and drowsiness. A student with this degree of hypoglycemia will need to ingest carbohydrates promptly and may require assistance. Severe hypoglycemia, which is rare, may lead to unconsciousness and convulsions and can be life-threatening if not treated promptly.

High blood glucose (hyperglycemia) occurs when the body gets too little insulin, too much food, or too little exercise; it may also be caused by stress or an illness such as a cold. The most common symp-

toms of hyperglycemia are thirst, frequent urination, and blurry vision. If untreated over a period of days, hyperglycemia can cause a serious condition called diabetic ketoacidosis (DKA), which is characterized by nausea, vomiting, and a high level of ketones in the blood and urine. For students using insulin infusion pumps, lack of insulin supply may lead to DKA more rapidly. DKA can be life-threatening and thus requires immediate medical attention.

References

1. LaPorte RE, Tajima N, Dorman JS, Cruickshanks KJ, Fherhardt MS, Rabin BS, Atchison RW, Wagener DK, Becker DJ, Orchard TJ: Differences between blacks and whites in the epidemiology of insulin-dependent diabetes mellitus in Allegheny County, Pennsylvania. *Am J Epidemiol* 123:592-603, 1986
2. Libman I, Songer T, LaPorte R: How many people in the U.S. have IDDM? *Diabetes Care* 16:841-842, 1993
3. Lipman FH: The epidemiology of type 1 diabetes in children 0-14 yr of age in Philadelphia. *Diabetes Care* 16:922-923, 1993
4. Rewers M, LaPorte R, King H, Tuomilehto J: Trends in the prevalence and incidence of diabetes: insulin-dependent diabetes mellitus in childhood. *World Health Stat Q* 41:179-189, 1988
5. American Diabetes Association: *Diabetes 1996 Vital Statistics*. Alexandria, VA, American Diabetes Association, 1996, p. 13-20
6. Dolche TM, for the Pittsburgh Diabetes Epidemiology Research Group: An epidemic of childhood diabetes in the United States? Evidence from Allegheny County, Pennsylvania. *Diabetes Care* 16:1606-1611, 1993
7. Rewers M: The changing face of epidemiology of insulin-dependent diabetes mellitus (IDDM): research designs and models of disease causation. *Ann Med* 23: 419-426, 1991
8. LaPorte RE, Matsushima M, Chang Y-F: Prevalence and incidence of insulin-dependent diabetes. In *Diabetes in America*, 2nd ed, Harris MI, Cowie CC, Stern MP, Boyko VJ, Reiber GE, Bennett PH, Eds. Washington, DC, U.S. Govt. Printing Office, 1995, p. 37-45 (NIH publ. no. 95-1468)
9. Diabetes Epidemiology Research International Group: Secular trends in incidence of childhood IDDM in 10 countries. *Diabetes* 39:838-864, 1990
10. Kostraba JN, Gay EC, Cai Y, Cruickshanks KJ, Rewers MJ, Klingensmith GJ, Chase HP, Hamman RF: Incidence of insulin-dependent diabetes mellitus in Colorado. *Epidemiology* 3:232-238, 1992
11. Kylo CJ, Nutall FQ: Prevalence of diabetes mellitus in school-age children in Minnesota. *Diabetes* 27:57-60, 1978
12. Wysocki T, Meinhold P, Cox DJ, Clarke WL: Survey of diabetes professionals regarding developmental charges in diabetes self-care. *Diabetes Care* 13:65-68, 1990
13. Jesi Stuthard and ADA v. Kindercare Learning Centers, Inc., Case no. C2-96-0185 (USCD South Ohio 8/96)
14. Calvin Davis and ADA v. LaFette Academy, Inc., Case no. CIV97-0083-PIIX-SMM (USCD Arizona 1997)
15. Agreement, Loudoun County Public Schools and Office of Civil Rights, United States Department of Education (Complaints nos. 11-90-1003, 11-90-1064, 11-90-1069, 1990)
16. Diabetes Control and Complications Trial Research Group: Effect of intensive treatment of diabetes on the development and progression of long-term complications in insulin-dependent diabetes mellitus. *N Engl J Med* 329:977-986, 1993
17. Diabetes Control and Complications Trial Research Group: Effect of intensive diabetes treatment on the development and progression of long-term complications in adolescents with insulin-dependent diabetes mellitus. *J Pediatr* 125:177-188, 1994
18. Hodges L, Parker J: Concerns of parents with diabetic children. *Pediatr Nurse* 13: 22-24, 1987
19. Lindsey R, Jarrett L, Hillman K: Elementary schoolteachers' understanding of diabetes. *Diabetes Educ* 13:312-314, 1987
20. Skyler JS (Ed.): *Medical Management of Type 1 Diabetes*, 3rd ed. Alexandria, VA, American Diabetes Association, 1998
21. American Diabetes Association: Type 2 diabetes in children and adolescents (Consensus Statement). *Diabetes Care* 23: 381-389, 2000

Care of Children with Diabetes

In the School and Day Care Settings



Diabetes – Chapter Guide

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 - Symptoms
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Diabetes – Overview

Diabetes is a disorder of metabolism — the way in which your body converts the food you eat into energy. Most of the food you eat is broken down by digestive juices into the fuel you need to survive including a sugar called glucose.

Glucose is the body's main source of energy. After digestion, glucose passes into your blood stream, where it is available for cells to take in and use or store for later use.

In order for your cells to take in glucose, a hormone called insulin must be present in your blood. Insulin acts as a “key” that unlocks “doors” on cell surfaces to allow glucose to enter the cells. Insulin is produced by special cells (islet cells) in an organ called the pancreas, which is about 6 inches long and lies behind your stomach.

In people who do not have diabetes, the pancreas automatically produces the right amount of insulin to enable glucose to enter cells. In people who have diabetes, the cells of the pancreas do not make adequate insulin or other cells in the body do not respond to the effects of the insulin produced by the pancreas. If glucose cannot get inside cells, it builds up in the bloodstream. The buildup of glucose in the blood — sometimes referred to as high blood sugar or hyperglycemia (which means “too much glucose in the blood”) — is the hallmark of diabetes.

When the glucose level in your blood goes above a certain level, the excess glucose flows out from the kidneys (two organs that filter wastes from the bloodstream) into the urine. The glucose takes water with it, which causes frequent urination and extreme thirst. These two conditions — frequent urination and unusual thirst — are usually the first noticeable signs of diabetes. Weight loss often follows, resulting from the loss of calories and water in urine. A summary of common symptoms of diabetes and factors that can affect blood sugar levels in people with diabetes follows.

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In School and Day Care Settings - Overview

Symptoms of High Blood Sugar that Characterize Diabetes in Children

- frequent urination (including during the night)
- unusual thirst
- extreme hunger/weakness
- unexplained weight loss
- extreme fatigue
- blurred vision

Types of Diabetes

Diabetes occurs in several different forms. This manual will focus primarily on issues related to Type 1 diabetes in children, as the majority of children who have diabetes have Type 1 diabetes. Information about Type 2 diabetes in children is also included.

Type 1 Diabetes in Children

Type 1 diabetes usually has a very rapid onset. It was previously called Juvenile Diabetes because most people develop it as children or teenagers. This type of diabetes occurs when the cells in the pancreas that make insulin are mistakenly damaged by the body's own immune defense system. The underlying cause for this damage has not been identified yet, although research is currently underway. To date, insulin injection is necessary for survival. The only treatment is to balance food intake, daily physical activity levels and insulin. Approximately 5-10 percent of all people with diabetes have Type 1 diabetes, but the majority of children with diabetes have Type 1. This translates to approximately one student per 400. There is no single way to treat Type 1 diabetes. Each child's life events vary and as such, experienced diabetes teams are necessary to set up individualized treatment plans.

In a successful treatment plan, an insulin regimen must be tailored to the needs of the child, as must a meal plan and recommendations for physical activity. It is the responsibility of the family to notify the school and work with the school on the treatment plan. New information on diabetes management allows people with diabetes to be more liberal with food planning. Children with diabetes should be allowed to participate fully in all school activities. They need the cooperation and support of school staff members to help them with their treatment plan.

Blood sugar monitoring is essential to help assess how well the treatment plan is working. Most children can perform blood sugar checks by themselves. This may be done safely in the classroom or the child may prefer a private place to do so. Some children may need supervision to ensure that the procedure is done properly and results are recorded accurately. It is helpful for the child to have a glucose meter at school so the blood can be checked when needed. How often the child checks or whether he/she checks at school at all are decisions made in conjunction with the child, family, child's diabetes team and school personnel.

It is the board of education's responsibility to ensure that staff, including nursing staff, has adequate training and updated skills in order to assist children with diabetes. The school nurse is responsible for recognizing when additional training is needed to perform a particular procedure and to help determine where the appropriate training can be obtained.

Type 2 Diabetes in Children

The most common form of diabetes is Type 2 diabetes, however, the majority of children with diabetes have Type 1. Type 1 diabetes is



Care of Children with Diabetes In School and Day Care Settings - Overview

characterized by the absence of insulin. Type 2 diabetes is characterized by the body's inability to use insulin properly. These individuals can have decreased, increased, or normal insulin levels, as such they may or may not require injected insulin. Some individuals can be treated with diet or oral medication. Obesity and lack of physical activity are strongly associated with the development of Type 2 diabetes. Unfortunately, dramatic increases in the rates of overweight and obesity are occurring in both adults and children in the United States. Approximately 85% of children diagnosed with Type 2 diabetes are obese or overweight at the time they are diagnosed. (Reference: American Diabetes Association, Type 2 Diabetes in Children and Adults, Diabetes Care, Volume 23, #3, March 2000)

Type 2 diabetes has long been considered an adult disease, seldom seen in children until recent years. Over the past decade Type 2 diabetes has increased greatly in children and has become a concern. Without intervention, this trend is likely to spiral out of control. The current average age of diagnosis in children is 13-14 years. An even earlier onset is expected to occur due to the increasing prevalence of overweight and obesity. The incidence of Type 2 diabetes is higher in adolescent girls than in adolescent boys. These children are vulnerable to the serious, long-term complications of diabetes, such as visual loss and blindness, amputations, and kidney disease.

In September 2000, the American Diabetes Association convened a Consensus Panel to investigate the rapid increase in Type 2 diabetes in children. Participants in the panel included national representatives from the American Diabetes Association, the Centers for Disease Control & Prevention, the American Academy of Pediatrics, and the National Institutes of Health.

The Consensus Panel acknowledged that there are insufficient data to make specific Type 2 diabetes testing recommendations for children and that further studies are needed.

(Reference: American Diabetes Association, Type 2 Diabetes in Children and Adults, Diabetes Care, Volume 23, #3, March 2000)

Risk factors for Type 2 diabetes in children include:

- Overweight or obesity;
- Sedentary lifestyle;
- Family history of Type 2 diabetes in first degree relatives (directly related by blood, such as a parent, son/daughter, sibling) or second-degree relatives (related by blood but not as closely, such as grandparent, aunt/uncle, niece/nephew);
- Member of certain racial or ethnic groups (American Indians, African Americans, Hispanic Americans, Asians/Pacific Islanders);
- High blood pressure or high cholesterol

Children with Type 2 diabetes require the same cooperation from teachers and school staff to support their diabetes treatment plans as children with Type 1 diabetes. Treatment plans for children with Type 2 diabetes are tailored to the individual needs of each child. The plan should include meal plan guidelines, physical activity recommendations, and often oral medications and/or insulin. Meal plans are based on a well-balanced diet with calorie control when slow weight loss is desirable.

Care of Children with Diabetes In School and Day Care Settings - Nutrition

Blood sugar monitoring is important for care and may be needed at regular times before meals or snacks. Signs of low blood sugar during undesigned times in school or with school-related activities will also require monitoring.

Type 2 diabetes is controllable and may even be preventable. Recently a major clinical trial, the Diabetes Prevention Program, revealed that modest lifestyle changes might be the best defense against diabetes. Overweight American adults at high risk for Type 2 diabetes were able to reduce their risk of the disease by 58% through modest changes in fat intake and calories and through moderate physical activity. The participants averaged a 5-7% weight loss (with an average 15 pounds) and walked an average of 30 minutes 5 days a week. These lifestyle interventions were effective in men and women, in all ethnic groups, and in the elderly.

Recommendations to prevent Type 2 diabetes in children and adults are similar. Efforts to use a public health approach to develop school and community-based programs for the implementation of healthy food choices at school and at home are strongly recommended. These may include the availability of fruits and vegetables, low-fat meal and snack choices, and smaller portions. Schools may adopt tougher “competitive food” policies and stringent rules regarding fat content and added sugars available. Efforts to expand physical education activities and parental encouragement to limit sedentary activities (e.g., time spent at the computer or watching television) are also recommended.

Parents/guardians, health care providers, teachers, school administrators, school nurses, food service staff, and community members can maximize their effectiveness by working together to promote school policies and environments that promote and support good health practices for all students.



Nutrition

Nutrition is one of the cornerstone of diabetes treatment. The goals of nutrition therapy include an adequate caloric and nutritional intake for growth and development and the balance of food with insulin and activity to achieve appropriate blood glucose levels.

Children with diabetes have the same nutritional needs as children without diabetes. A meal plan needs to be developed to meet the individual needs of the child, taking into consideration food preferences, cultural influences, family eating patterns and schedules, weight, activity level, and insulin action peaks. Other family members can benefit from these healthy eating guidelines.

There are three major nutrients found in the food groups identified on the Food Guide Pyramid. A summary of these nutrients (protein, fat and carbohydrate), their roles in the body, the food groups that contain them, and their impact on blood sugar follows.

Protein is used to build and repair body tissues. Protein is important for normal growth and development. Eaten by itself, protein has little effect on blood sugar. As part of a mixed meal, protein may slow the absorption of carbohydrates, causing blood sugar to rise more gradually.

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In School and Day Care Settings - Nutrition

Many popular body building and weight loss regimens emphasize protein in meal plans. It is not uncommon for individuals following such meal plans to turn to protein supplements in the form of powders, shakes, etc. to boost their protein intake. It is important to note that protein needs for even vigorous athletes can be easily met with everyday food sources. For people with diabetes, it is especially important that they discuss with their health care providers any protein supplement or any other nutritional supplement to their personal meal plans, due to the potential impact the addition of these supplements may have on blood sugar levels.

Sources of protein include eggs, meat, chicken, fish, cheese, nuts and seeds.

Fats carry the flavor of our foods, and are a very concentrated source of energy for the body. They also slow the emptying time of the stomach after a meal. Eaten alone, fats have very little effect on blood sugar. As part of a mixed meal, fats may slow the absorption of carbohydrates, causing a more gradual rise in blood sugar.

Sources of fat include margarine, butter, oil, salad dressings, and mayonnaise.

Carbohydrates provide most of the energy we need to move, work and live. As such, the majority of calories consumed should come from carbohydrate sources, spaced appropriately throughout the day. Of all the food components, carbohydrates have the greatest effect on blood sugar. The total amount of carbohydrate consumed has more of an effect on blood sugar than the type of carbohydrate.

Sources of carbohydrates can be listed in four groups:

- (1) Starches – which include breads, cereals, pasta, rice, starch, vegetables, cooked beans and peas, and snack foods;**
- (2) Fruits and juices;**
- (3) Milk and yogurt; and**
- (4) Sweets**

Meal planning for diabetes includes all the principles of good nutrition that are recommended for good health. People with diabetes are encouraged to choose a well-balanced diet with a controlled amount of carbohydrates at each meal and snack in order to help manage blood sugar.

Healthy carbohydrates from starches, fruits and milk are encouraged daily. Sweets can be worked into a meal plan on a limited basis. This is true for any child or adult with or without diabetes.

Carbohydrate information can be obtained from many sources, including the Food Guide Pyramid, food labels, and any number of books that contain nutrient information of specific foods.

Individualizing Meal Plans for Children with Diabetes

It is recommended that children see a Registered Dietitian, preferably one who is a Certified Diabetes Educator, for an individualized meal plan. The meal plan should include three meals and may include snacks with a specific amount of carbohydrate. The meals and snacks should be timed appropriately with the child's insulin. Each child needs a certain amount of carbohydrate based on age, size, gender and activity level.

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In School and Day Care Settings - Nutrition

Knowing the carbohydrate content of given foods allows for more flexibility in the meal plan. Fifteen grams of carbohydrate is a standard of measurement for one carbohydrate serving in the care of diabetes. The following chart illustrates examples of foods that contain approximately 15 grams of carbohydrate.

Examples of 15 Gram Carbohydrate Snack Choices

Choose More Often	Choose Less Often
1 cup low fat milk	1 mini (1 ounce) bag potato chips
1 (4 ounce) juice box	1 small unfrosted cupcake
1 (4 ounce) jar canned fruit	2 small cookies
1 piece fresh fruit	1/2 cup ice cream
8 animal crackers	1 snack pack pudding
1-1 1/2 whole graham crackers	1 (2 inch) square of unfrosted birthday cake
1 mini (3/4 ounce) bag pretzels	
4 peanut butter or cheese crackers	

Food Labels

Reading food labels is a convenient method for determining how a food may fit into a daily meal plan. The "Nutrition Facts" panel on food labels tells how much carbohydrate is in one serving of that food. Using the food label example below, figure out how many carbohydrates are in one serving by following these steps:

How to read labels

The "Nutrition Facts" panel on food labels tells how much carbohydrate is in one serving of that food and defines the size of that serving.

To figure out how many carbohydrates are in one serving, follow these steps: For the food label shown:

- Find the **Serving Size**.
- Find the **Total Carbohydrates** per serving.
- Divide total carbohydrates by 15 to find how many carbohydrate servings are in one serving of the food.
- If the child is going to have more than one serving of the food, multiply the number of servings by the total carbohydrates per serving. This will tell you how many carbohydrate servings the child is eating.



Care of Children with Diabetes In School and Day Care Settings - Nutrition

Sample food label

Nutrition Facts	
Serving Size 8 fl oz (240ml)	
Servings Per Container 4	
Amount Per Serving	
Calories 50	
	% Daily Value*
Total Fat 0 g	0 %
Sodium 110 mg	5 %
Potassium 30 mg	1 %
Total Carbohydrate 14 g	5 %
Sugars 14 g	
Protein 0 g	
Not a significant source of Calories From Fat, Saturated Fat, Cholesterol, Dietary Fiber, Vitamin A, Vitamin C, Calcium, Iron.	
* Percent Daily Values are based on a 2,000 calorie diet.	

- Serving Size: 8 fl. oz. (240 ml.)
- Total Carbohydrate: 14 gm.
- 14 gm. divided by 15 gm. = 0.93 = 1 (one) carbohydrate serving (Round to the nearest half carbohydrate serving.)
- 8 fl. oz. (240 ml.) = 1 (one) carbohydrate serving

Special Nutrition Issues

School Lunch:

Children with diabetes may participate in the school lunch program. Parents/guardians can review the school menu ahead of time and request modifications for their child as needed. Parents/guardians may also wish to contact the school food service director if needed for planning meals while in school.

After School:

Children should have a convenient snack if staying after school. Parents/guardians should notify school personnel that the child may need to eat during the session. A physician's order may also be necessary.

School Parties:

Sweets can be eaten on a special occasion such as a birthday party or Halloween party. The carbohydrates should be included as part of the child's meal plan. School staff should check with the child's parent/guardian for a list of special occasions foods included in their meal plan if the parents/guardians have not supplied an alternate snack for their child.

Field Trips:

Whenever on a field trip, children should carry convenient snacks. Bus drivers and chaperones should be notified by the school staff that the child has diabetes and may need to eat a snack during the trip.



Care of Children with Diabetes In School and Day Care Settings - Physical Activity



Physical Activity

Physical activity is an important part of the overall management of diabetes. The benefits of physical activity include cardiovascular fitness, long term weight control, social interaction and the promotion of self-esteem fostered by team play. Additionally, physical activity can help to lower blood sugar.

Physical activity is a fundamental part of a healthy lifestyle for all children, including children with diabetes. Children with diabetes can participate in gym class and after-school sports. Health care providers may suggest adjustments in medication and food for appropriate blood glucose control. Families are encouraged to include more physical activity at home.

Physical Activity Special Issues:

A low blood sugar can occur many hours after a period of vigorous physical activity. The child may need to check his/her blood sugar and/or take an extra snack with physical activity.

See the child's Individualized Diabetes Health Care Plan for Diabetes Management for recommendations on the individual treatment.

General Physical Activity Guidelines for Individuals with Diabetes

1. Drink lots of sugar-free fluids, especially water.
2. Have rapid-acting carbohydrate sources available such as juice, glucose tablets, jelly beans or gum drops.
3. Test blood sugar before, during and after physical activity based on needs of the individual child.
4. Wear Medical Alert Identification indicating Diabetes.
5. To avoid low blood sugar – eat more carbohydrates or talk with your health care provider about reducing the amount of insulin prior to physical activity.
6. The blood sugar should be checked according to the individualized health care plan for diabetes management so proper measures can be taken to keep the level in the appropriate range.
7. Avoid exercise if fasting glucose levels are greater than 250 mg/dl and ketones are present in the urine. Use caution if glucose levels are greater than 300 mg/dl and there are no ketones present in the urine.
8. Ingest additional carbohydrates if glucose levels are less than 100 mg/dl.
9. Test blood sugar with any unusual symptom a child may have.



Care of Children with Diabetes In School and Day Care Settings - Blood Sugar Monitoring



Blood Sugar Monitoring

Blood sugar monitoring is a necessary and useful tool in the management of diabetes. Monitoring helps look for patterns of blood sugar values as well as help to detect acute problems of high or low blood sugar. Persons on intensive management plans monitor their blood sugar every time they eat a meal to help them decide how much insulin to take at that time. There are numerous brands of monitors available, each with specific features that an individual may find useful. The school nurse needs to become familiar with the various monitors being used. The school nurse can play an integral role in assisting children with diabetes in their tasks of daily management while at school

What level should a blood sugar be?

For a person who does not have diabetes, a normal blood sugar level is 70-120 mg/dl. Blood sugar levels in a child with diabetes will vary depending on insulin action times, food consumed, activity level, and illness. The diabetes health care professional will advise the child's family on an appropriate "target range." The goal is for the blood sugar to fall within the target range the majority of the time; recognizing that the blood sugar levels will fluctuate. It is common for children with diabetes to experience fluctuations of their blood sugar levels outside of their target range. The child's diabetes care plan should include his/her target range and outline the corrective actions.

Some helpful suggestions:

- Most children can perform blood sugar checks by themselves. This may be done safely in the

classroom or the child may prefer to do this in a more private setting.

- Allow child to assist in the steps in the monitoring procedure. How much involvement will depend upon the age of the child and their personality. Even small children can help with some of the steps such as choosing the finger or getting the strip out of the container.
- The finger should be cleaned with warm soapy water and dry before being pricked. (Use an alcohol wipe if handwashing is not available.)
- Apply adequate amount of blood to the test strip.
- Don't get in the habit of calling blood sugar results "good" or "bad." Values are either "within range" or "out of range" which can be called "high" or "low." Try to use a non-judgmental approach when a result is abnormal.
- If the blood sugar reading is unusually high or unusually low, repeat the test. Then, treat for hyperglycemia or hypoglycemia if the second test indicates it is necessary. See Individual Treatment Plan.

The following criteria can be used by schools to determine if it is appropriate for a child to perform blood sugar self-testing at school.

Blood Sugar Self-testing Criteria:

- The child demonstrates accurate finger-stick technique.
- The child uses appropriate infection control practices consistently.
- The child disposes of sharps appropriately.
- The child is able to interpret blood sugar results and seek appropriate treatment if necessary.

If the child does not meet these criteria, he/she may require staff assistance.

Care of Children with Diabetes

In School and Day Care Settings - Hypoglycemia



Hypoglycemia

Hypoglycemia: Low Blood Sugar (Insulin Reaction)

Warning signs and symptoms of low blood sugar (insulin reaction) may happen suddenly. Signs and symptoms can easily be mistaken for misbehavior. The child may not recognize symptoms developing. Intensity of a low blood sugar reaction may progress from mild to severe.

Severe reactions are often preventable by early detection and treatment of low blood sugars. School staff need to be familiar with identification and treatment of low blood sugar to avert an emergency situation. Blood sugars can go too low if the child with diabetes has:

- Taken too much insulin
- Not eaten enough food
- Had extra exercise without extra food or decrease in insulin

Mild Hypoglycemia-blood sugar between 50 and 70 mg/dl

Signs and Symptoms — A wide variety of symptoms and behaviors can occur:

- Change in personality
- Acting quiet and withdrawn
- Being stubborn or restless
- Tantrums or sudden rage
- Inappropriate emotional responses (e.g., laughter, crying)
- Poor concentration or day-dreaming
- Shakiness
- Lack of response to verbal communication
- Sweatiness

- Headache
- Pale appearance
- Increased heart rate

If the child appears to be having signs or symptoms check blood sugar immediately. If the blood sugar level is unknown, go ahead and treat the symptoms.

Never send a child suspected of having a low blood sugar to the nurse's office alone. Send another student to get help if needed.

What To Do For A Child Who Is Showing Signs and Symptoms of Mild Hypoglycemia

Optimally, check blood sugar before treating a child suspected of hypoglycemia. When in doubt, treat. To treat, give the child some quick-acting sugar (15 grams of carbohydrate), such as one of the following:

- 1/2 cup (4 oz.) of juice
- 3/4 cup (6 oz.) of REGULAR (not diet) soda
- 3-4 glucose tablets/ 1 tube glucose gel
- 4-5 small jelly beans or gums drops
- 1 mini box of raisins
- 1 cup (8 oz.) low fat or skim milk

Check the blood sugar 15 minutes after treatment. If the blood sugar result is less than 70 mg/dl, or if the child still has symptoms, repeat the quick sugar treatment and blood sugar testing cycle until the child is symptom-free and the blood sugar result is above 70 mg/dl. When the child feels better and the blood sugar result is above 70mg/dl, give one (1) of the following if the child's next meal is more than one hour away and/or if the child will be participating in active play/sports following this low blood sugar episode:



Care of Children with Diabetes In School and Day Care Settings - Hypoglycemia

- 4 graham cracker squares with peanut butter or cheese
- 6 saltine crackers with peanut butter or cheese
- or the equivalent combination of carbohydrate (approximately 15 grams) and protein (approximately 1 oz.)

The child may return to class after the blood sugar is above 70 mg/dl and the child no longer has symptoms.

Moderate to Severe Hypoglycemia-blood sugar 40 mg/dl or less

Signs and Symptoms

- Staggering walk
- Pale appearance
- Uncontrollable crying episode
- Slurred speech
- Blank stare
- Refusal to take anything by mouth
- Confusion

Double the treatment amounts as indicated in the treatment for mild hypoglycemia. If the child has difficulty drinking but is able to swallow, (child may not be able to follow directions) place cake gel or glucose gel in between the child's cheek and gums. Administer the entire tube. Rub the cheek gently to make sure sugar is being absorbed. Follow with food if more than 30 minutes until next meal or snacks (see mild hypoglycemia). The child may return to class after the blood sugar is above 70 mg/dl and when the child no longer has symptoms.

Severe Hypoglycemia —

This is a Medical Emergency!!!

Signs and Symptoms

- Unconscious
- Unresponsive
- Convulsion-like movement

Be sure child is lying down in a safe area protected from head and bodily injury. Position the child on his/her side. Call 911, and give Glucagon (see following section) by injection per medical order. Do not attempt to put anything between the teeth. As the child regains consciousness, nausea and vomiting may occur. Notify parents/guardians and/or health care provider of the episode as soon as possible.

What is Glucagon?

Glucagon is a hormone that causes the liver to release sugar into the blood. It is used to raise the blood sugar when a child is unable to take liquids or food by mouth because of severe sleepiness, unconsciousness, or seizure activity. Glucagon must be injected with a syringe into the skin, like insulin.

When Do You Use Glucagon?

Glucagon is used when a child with diabetes has low blood sugar (hypoglycemia) and is unable to take liquid or food by mouth because of severe sleepiness, unconsciousness, or seizure activity. It should be administered as soon as possible. **The risk of not giving Glucagon is more life-threatening than giving it under these emergency conditions.**



Care of Children with Diabetes In School and Day Care Settings - Hypoglycemia

What You Need

- One Glucagon Emergency Kit supplied by the family (check the expiration date). Keep Glucagon at room temperature, and inform the appropriate staff of the storage location. When possible, practice drawing up Glucagon with an expired kit. Check the date of Glucagon kits on a regular basis. Discard if past the expiration date. Obtain a refill immediately.
- Use of Glucagon should be part of a child's Individualized Health Care Plan for Diabetes Management, and should include a physician authorization and signature.
- Clean disposable gloves supplied by school for diabetes management

When Possible, Check a Blood Sugar Before and/or After Giving Glucagon.

To Inject Glucagon:

- Call 911.
- Put clean, disposable gloves on.
- Glucagon is in a kit containing the Glucagon powder in a vial and the diluent in a Glucagon syringe.
- Remove the seal from the bottle of Glucagon in the kit (the small vial/bottle containing a white powder/pellet).
- Inject the liquid in the syringe into the bottle of Glucagon.
- Remove syringe from the bottle of Glucagon, shake the bottle gently until the Glucagon dissolves (looks clear).
- Draw solution from vial/bottle into the syringe.
- The Glucagon syringe is marked with only two dosages, 0.5 mg, and 1.0 mg. See the child's individualized care plan for the proper dosage for that child.
- Insert needle into loose tissue of buttock, arm or thigh. Inject proper dosage of Glucagon.
- Keep the child lying on their side in case of vomiting.
- Once the child is awake give a snack such as peanut butter and crackers or cheese and crackers.

Note: *It is common for the child to vomit or feel nauseous after receiving Glucagon.*



Care of Children with Diabetes In School and Day Care Settings - Hypoglycemia

To Prepare Glucagon For Injection

Note: Glucagon should not be prepared for injection until the emergency arises.

1. Put clean, disposable gloves on.
2. Remove the flip-off seal from the vial (bottle) of Glucagon. Wipe rubber stopper on vial with alcohol swab.
3. Remove the needle protector from the syringe, and inject entire contents of the syringe into vial of Glucagon.
4. Remove syringe. Shake vial gently until Glucagon dissolves and the solution becomes clear.

Glucagon should not be used unless the solution is clear and of a water-like consistency.

To Administer Glucagon

Use same technique as for injecting insulin

1. Using the same syringe, withdraw all of the solution from the vial.
2. Cleanse injection site on buttock, arm, or thigh with alcohol swab.
3. See specific diabetes care plan for Glucagon dose.
4. Insert the needle into the loose tissue under the cleansed injection site and inject the Glucagon solution. Apply light pressure at the injection site and withdraw the needle.
5. After injection, don't recap needle, place used needle in a commercially-available sharps container.

Caution

1. Low blood glucose may cause convulsions.
2. When an unconscious patient awakens, he/she may vomit. To prevent the patient from choking on vomit, turn the patient on his/her side.

*Adapted from New York State Department of Health
"Children with Diabetes – A Resource Guide for Schools"

Care of Children with Diabetes

In School and Day Care Settings - Hyperglycemia



Hyperglycemia (high blood sugar) and monitoring for presence of ketones

Hyperglycemia- Blood glucose above 240 mg/dl

Signs and Symptoms:

- Loss of appetite
- Increased thirst
- Frequent urination
- Tiredness, sleepiness
- Inattentiveness
- Rapid breathing
- Fruity odor to the breath
- Nausea
- Vomiting

Possible causes:

- Not enough insulin
- Too much food
- Lack of physical activity
- Illness/Infection
- Stress

If the child has warning signs and symptoms of hyperglycemia, check the blood sugar. If blood sugar becomes very high, the student may begin to utilize fat for energy, and produce a harmful by-product of fat metabolism called ketones. Generally these symptoms occur gradually.

Urine Testing for Ketones

Ketones in the urine are a warning sign that the body is burning fat for fuel instead of sugar, and this could mean diabetes is out of control. Urine ketones may be monitored if the child is ill or has a high blood sugar. See the child's diabetes care plan for instructions. Urine testing products are

read by comparing the test color to a standard color chart. Factors such as handling the color pad with your hands as well as placing test materials on a counter recently cleaned with bleach can cause inaccurate results. Be sure to read the package insert for proper handling of the product.

Be aware of expiration dates. Once a bottle of strips is opened they are only good for a specified time. Check the label regarding how long they are good after first opening. Ketone strips are available in individually foil-wrapped packages. These strips will last until the expiration date. These may need to be requested from the pharmacy as a special order item if they are not routinely stocked.

Interpreting Urine Ketone Results

If Urine Ketones are:

Negative to small: give lots of fluids (sugar free such as water or diet soda pop). Recheck blood glucose and urine for ketones in 2-4 hours.

Moderate to large: call parent/guardian/diabetes team — additional rapid-acting or short-acting insulin may need to be given. Encourage fluids by mouth. Seek guidance from a physician if ketones are moderate or large. If the blood sugar test result in school is high, according to the child's diabetes care plan, or if the student has warning signs of high blood sugar, parents/guardians need to be made aware. This does not have to occur immediately unless the student is spilling moderate or large ketones. When ketones are moderate or large, a serious medical condition called ketoacidosis may be developing. The parents/guardians should be advised immediately if the child is vomiting and unable to take fluids by mouth.

Never withhold food or make child perform extra exercise to treat high blood sugar episodes.



Care of Children with Diabetes In School and Day Care Settings - Insulin



Insulin and Insulin Delivery Systems

Insulin

There are many different types of insulin for different situations and lifestyles.

Characteristics - Three characteristics of insulin:

Onset — The length of time before insulin reaches the bloodstream and begins lowering blood sugar.

Peak time — The time during which a dose of insulin is most effective in terms of lowering blood sugar levels.

Duration — How long the insulin continues to lower blood sugar.

Storage

- Opened vials may be left at room temperature or refrigerated for 30 days after opening.
- Avoid exposure to extreme temperatures. Any insulin found frozen cannot be used, and must be discarded.
- Unopened vials can be stored in the refrigerator until the expiration date.
- Check the manufacturer's patient information insert for storage and length of use for insulin pens.

Expiration date

Do not use insulin after expiration date. You may need to discard unused insulin..

Types of Insulin by Comparative Action Curves

Action Time	*Insulin Type	Onset	Peak (hrs.)	Usual Effective Duration (hrs.)	Usual Maximum Duration (hrs.)
Rapid-Acting	Lispro (Humalog)	<15 minutes!	.5-1.5	2-4	4-6
Rapid-Acting	Aspart (Novolog)	<15 minutes!	.5-1.5	2-4	4-6
Short-Acting	Regular	0.5-1 hr.	2-3	3-6	6-10
Intermediate Acting	NPH	2-4 hrs.	4-10	10-16	14-18
Intermediate Acting	Lente	3-4 hrs.	4-12	12-18	16-20
Long Acting	Ultralente	6-10 hrs.	None	18-20	20-24
Long Acting	Glargine (Lantus)	4-5 hrs	None	24	24

* Pre-mixed insulin (a mixture of NPH and regular) is also available, but is generally not recommended for children.

Care of Children with Diabetes

In School and Day Care Settings - Insulin Delivery



Insulin Delivery Systems

Syringes...pumps...pens...they all do the same thing – deliver insulin. These items deliver insulin into the tissue so it can be used by the body.

This category also includes injection aids – products designed to make giving an injection easier.

Syringes

Today's insulin syringes are smaller and have finer needles and special coatings that work to make injecting as easy and painless as possible. When insulin injections are done properly, most people discover they are relatively painless.

Points to Consider for Optimal Insulin Delivery by Syringe

- The syringe being used should be the right size for the insulin dose.
- It should be easy to draw up and visualize the dosage (devices are available to make this task less complicated).
- Shorter, finer needles are available which allow for ease of administration.

Insulin Pens

There is a wide range of insulin pen options available. The pens can be an excellent option when children need a single kind of insulin. They can make taking insulin much more convenient. Some children find the pen needles make injection more comfortable.

Pumps

Insulin pumps are computerized devices, about the size of a beeper or pager, which you can wear on your belt or in your pocket. They deliver a steady, measured dose of insulin through a cannula (a flexible plastic tube) with a small needle that is inserted through the skin into the fatty tissue. The needle is removed and the cannula is taped in place. Insulin pumps may be worn during most athletic activities. The cannula may be placed on one of several sites on the body, including the abdomen, buttocks, thigh, or arm.

Advantages

- Pumps most closely mimic the body's normal release of insulin.
- Pumps deliver insulin in two ways:
 - Basal: small, hourly dose that is pre-programmed
 - Bolus: given to cover food or cover high blood sugar
- Pump therapy allows for much greater flexibility in food choices and meal timing.
- Children who wear pumps can participate in all school activities.

Responsibilities of Pump Wearer

- Must be willing to test blood sugar minimum of 4 times/day
- Must learn how to make adjustments in insulin, food and exercise in response to those test results
- Must respond to blood sugar readings
- Must know how to "troubleshoot" the pump if blood sugars are inexplicably too high or too low.
- Must keep back-up insulin, syringe or pen, and pump supplies available at school and home in case of cannula occlusion and/or pump failure.



Care of Children with Diabetes In School and Day Care Settings - Insulin Delivery

Disposing of Sharps Safely

Millions of individuals with serious health conditions manage their care at home. For example, people with diabetes use syringes to inject their own insulin and lancets to test their blood sugar every day. All this creates a lot of medical waste. What's the best way to handle this waste?

The best way to protect trash handlers and sewage treatment workers against disease or injury and avoid attracting drug abusers looking for syringes to reuse is to follow these guidelines for containment and disposal of sharps.

Containment

- Place the sharps in a commercially-available sharps container.
- Once a syringe or lancet is used, immediately put it into a sharps container.
- Keep the sharps container away from children!
- When the container is full, follow the manufacturers guidelines on sealing and locking the container. Notify the building and grounds staff or appropriate school personnel for removal.

Disposal

There are different options for getting rid of the container of sharps. Some cities and towns have more options than others. Here are the best bets for safety, health and protection of the environment.

Do not put the sharps container out with the recyclable plastics — Sharps are not recyclable.

Ask your local doctor or clinic, school's medical advisor, diabetes support group, pharmacy, hospital, public health department, solid waste or

streets department or environmental services department about local options. Some of them may be registered sharps collection stations. You may also call your local Department of Natural Resources (DNR) office (ask for the waste management specialist) or the American Diabetes Association (1-888-342-2383) for locations of registered sharps collection stations. Registered sharps collection stations may charge fees only to recover costs, such as costs for the container, transportation and treatment. Some offer the service for free.

If there are no sharps collection stations in your area, you may take sharps directly to a licensed infectious waste treatment facility or contract with a licensed infectious waste hauler to transport them for you. (People transporting more than 50 pounds per month must get a license from the DNR.) Ask your doctor where she or he sends sharps, or look in the yellow pages under "waste disposal" or "medical waste."

Another option provided by some disposal companies is a mail-in sharps disposal program. The company provides containers and packaging that meet U.S. Postal regulations.

For more information contact:

Wisconsin Department of Natural Resources

Phone: (608) 266-2111

E-mail: medwaste@dnr.state.wi.us

Website: www.dnr.state.wi.us
search for "sharps disposal"

For a list of places to dispose of sharps, call DNR at (608) 266-2111 or the American Diabetes Association, Wisconsin, 1-888-342-2393.



Care of Children with Diabetes In School and Day Care Settings - Helping Others



Helping Others Take Care of the Child with Diabetes

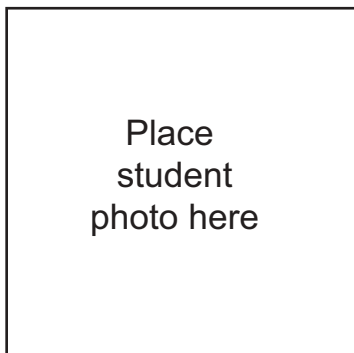
There will be many people who will be responsible for the care and supervision of the child with diabetes. Each day the child will encounter nurses, teachers, coaches, bus drivers, baby-sitters, friends, relatives, etc. who will need to know some key information in order to safely supervise the child's care. This section includes two resources for parents/guardians and school personnel to be used to help facilitate communication and to supplement the education provided to these caregivers.

The first resource is the Individualized Emergency School Health Plan. This form includes basic information about the care of the child with diabetes. It is suggested that this form be laminated or printed on card stock to be used as a quick reference for nurses, teachers, coaches, bus drivers, cafeteria aides, friends, field trip chaperones, etc. This approach works quite well when you need to communicate to a large staff or groups of people. Many families have a large number of cards printed and always have their child carry cards to be distributed to caregivers as needed. The other resource is the Individualized Health Care Plan for Diabetes Management. This can be copied and used to communicate to those who care for the child on a more extended basis.

Both resources can be individualized to describe the child's particular schedule, symptoms of low blood sugar and how to treat a reaction.

INDIVIDUALIZED EMERGENCY SCHOOL HEALTH PLAN FOR DIABETES MANAGEMENT

Student Name _____ Grade No. _____ Teacher _____



I have **INSULIN-DEPENDENT DIABETES** which means I must take insulin every day along with balancing diet and exercise. Several times a day I check my blood sugar levels by using a special meter that I keep ☐ with me ☐ in the office ☐ other _____. It is important for you to understand some important things about diabetes while I am in your care

LOW BLOOD SUGAR REACTIONS

Occasionally, my blood sugar may be too low (insulin reaction). This can be very dangerous. A low blood sugar reaction can be a result of receiving too much insulin, skipping a meal or snack, or an unusual amount of exercise. If you think my blood sugar is low, I may check my blood sugar in the classroom. If I go elsewhere to check my blood sugar, **someone must accompany me**. Some symptoms of low blood sugar may be:

- Shakiness
- Change in personality
- Confusion
- Sweatiness
- Feeling "low" or "hungry" or "tired"
- Looking pale or flushed in the face

If my blood sugar is low, (<60mg/dl) **I NEED FAST-ACTING SUGAR QUICKLY**

You can give me _____. I should start to feel better in 10 to 15 minutes. If my blood sugar remains low, call my parents and do the following: _____

If my blood sugar drops too low, I may become unconscious or have a seizure. If this happens:

1. **CALL 911**
2. Give **GLUCAGON** by injection. The following staff are trained to do this:

3. Call my parents

Glucagon is not life threatening even if it is given when not needed.

Emergency Numbers

Name - Mother _____ Home Telephone No. _____ Work Telephone No. _____

Name - Father _____ Home Telephone No. _____ Work Telephone No. _____

Other (relationship) _____ Home Telephone No. _____ Work Telephone No. _____

Health care provider _____ Office Telephone No. _____

List preferred hospital _____

Date prepared _____

INDIVIDUALIZED HEALTH CARE PLAN FOR DIABETES MANAGEMENT

Student Name _____ Date of Birth _____

School _____ Grade _____ Teacher _____

BLOOD SUGAR TESTING (Check ALL that apply)

- ☐ Will not test at school.
- ☐ Will be done by student every day at _____
- ☐ Will be done by student when symptoms are present _____
- ☐ Will need assistance from an adult. **Physician's Authorization must be signed.**
- ☐ Will **not** need assistance from an adult.
- ☐ Testing supplies will be kept at school in _____

INSULIN NEEDS (Check ALL that apply)

- ☐ Will **not** need insulin at school.
- ☐ Will need insulin at school. Complete **"Authorization to Administer Insulin."**
- ☐ Will be using an insulin pump and is self-sufficient in its use.
- ☐ Will be using an insulin pump and will need assistance.

FOOD PLAN (Check ALL that apply)

- ☐ Will bring daily morning snack of _____ carbohydrates to be eaten at _____ a.m.
- ☐ Will bring daily afternoon snack of _____ carbohydrates to be eaten at _____ p.m.
- ☐ Will eat _____ carbohydrate servings or _____ grams of carbohydrates at lunch.
- ☐ On special occasions, student can eat same snack provided to classmates.
- ☐ On special occasions, student will select alternate snack from supply provided by parent.

MEALS AND INSULIN NEEDS

Breakfast	Snack	Lunch	Snack	Snack	Supper	Snack
Insulin/Carbs	Insulin/Carbs	Insulin/Carbs	Insulin/Carbs	Insulin/Carbs	Insulin/Carbs	Insulin/Carbs
____ / ____	____ / ____	____ / ____	____ / ____	____ / ____	____ / ____	____ / ____
TIME _____	_____	_____	_____	_____	_____	_____

Insulin Type: _____

Blood Glucose
Target Range: _____

Sliding Scale (S/S)

Blood Sugar	Insulin Dose
mg/dl	units
mg/dl	units
mg/dl	units
mg/dl	units

Comments _____

Date completed _____

LOW BLOOD SUGAR SYMPTOMS

- Blurred vision • Fatigue • Irritability • Trembling
- Dizziness • Headache • Personality change • Weakness
- Fast heartbeat • Hunger • Sweating

Comments: _____

LOW BLOOD SUGAR TREATMENT (TEACHERS: Students with symptoms MUST be escorted to the Health Room)

If student is experiencing symptoms, TEST BLOOD SUGAR.

For blood sugar < _____ give 15 gms fast acting carbohydrate _____.

For blood sugar < _____ give 30 gms fast acting carbohydrate _____.

If lunch or snack time – allow child to eat normal amounts of carbohydrate.

If not lunch or snack time – repeat blood sugar in 15 – 20 minutes. Repeat treatment as needed.

(Parent will provide appropriate drinks and/or food)

Retest blood sugar in _____ minutes. If under _____, repeat above treatment. If student is feeling better, he/she can:

LOW BLOOD SUGAR TREATMENT FOR INSULIN PUMP THERAPY: In addition to the interventions listed above, if student who is using an insulin pump becomes unconscious due to a severe low blood sugar, trained staff will disconnect tubing from insulin pump, call 911 and the child's parent.

For severe hypoglycemia with loss of consciousness or seizure, call 911, administer Glucagon 0.5mg (<44lbs.), 1mg (>44lbs.), then shut pump off and call parents.

Comments: _____

HIGH BLOOD SUGAR SYMPTOMS (TEACHERS: Allow use of a water bottle in class and use of the restroom as needed.)

- Blurred vision • Frequent urination • Nausea/vomiting
- Drowsiness • Heavy, labored breathing • Stomachache
- Extreme thirst • Hunger

Comments: _____

Test blood sugar, if over _____ student should drink large amounts of water.

Test urine ketones if blood sugar is over _____, or if child is experiencing symptoms of high blood sugar.

HIGH BLOOD SUGAR TREATMENT FOR INSULIN PUMP THERAPY: In addition to the interventions listed above, if student is using an insulin pump and blood sugar is over 240 or _____ for two readings in a row, call parent/guardian.

Blood Glucose Target Range: _____

On Insulin Pump Therapy – High blood sugar before meals and 2 hours after:

- Assess for pump/tubing/site problems.
- Blood sugar is > _____ give extra insulin by using the S/S or ISF.
- Repeat blood sugar within _____ HOUR(s) if previous blood sugar > _____.
- If repeat blood sugar > _____ give insulin by syringe using the S/S or ISF.
- Contact parents/guardian and/or health care provider if blood sugar > _____ and vomiting, difficulty breathing or lethargy (or other ketoacidosis).
- Repeat blood sugar every _____ HOUR(s). Give insulin using the S/S or ISF until the blood sugar is < _____.

Insulin Sensitivity Factor (ISF) (correction factor)	Sliding Scale (S/S)	
	Blood Sugar	Insulin Dose
	mg/dl	unit
	mg/dl	unit
	mg/dl	unit
1 unit of insulin will bring the blood sugar level down by _____ mg/dl.	mg/dl	unit
See student's table or formula	mg/dl	unit

Comments: _____

**INDIVIDUALIZED HEALTH CARE PLAN FOR DIABETES MANAGEMENT
AUTHORIZATION/SIGNATURES**

Student Name _____ Date of Birth _____

School Grade _____ Date Authorized _____

School _____

I have reviewed and approved the Individualized Health Care Plan for Diabetes Management. I understand that specialized health care services will be performed by designated school personnel under the training and supervision provided by the School District Nurse or designee. This consent shall remain in effect through the end of the current school year unless discontinued or changed in writing. The plan or appropriate parts of the plan will be shared with relevant school staff.

SIGNATURE – Physician _____ Date Signed _____

SIGNATURE – Parent _____ Date Signed _____

SIGNATURE – Nurse
and/or designee _____ Date Signed _____

SIGNATURE – Building
Administrator _____ Date Signed _____

SIGNATURE – Staff Members (who have access to the care plan):

T Tools and Information for Parents/Guardians



Tools and Information for Parents/Guardians - Chapter Guide

- Juvenile Diabetes Research Foundation – Your Child Has Diabetes
- Parents/Guardians of Children with Diabetes Have Responsibilities Too
- Appropriate Accommodations Under Law
 - Parents'/Guardians' Rights
 - Education
- Age Related Responsibilities of Children
- Psychosocial Aspects of the Child With Diabetes
- Factors Causing Emotional Distress at Diagnosis of Diabetes in a Child



Juvenile Diabetes Research Foundation – Your Child Has Diabetes

Helping Your Child Live With Diabetes

Your child has diabetes . . .

For the individual child and the whole family, diabetes changes life. As parents/guardians of children with diabetes, we know that. But we also know this: diabetes may change your family's life, but it needn't become your family's life.

First, we want to assure you, emphatically, that your child can lead a full and normal emotional life with diabetes. This brochure introduces some of the psychological, emotional, and social challenges you may encounter in raising your child or teenager with Type 1 (insulin-dependent or juvenile) diabetes.

Young Children and Diabetes

Young children may have difficulty understanding the sudden changes—glucose monitoring, insulin injections, food restrictions—that Type 1 diabetes brings to their lives. Some common reactions among children are:

- A feeling they are being punished for disobedience
- Feelings of shame or guilt
- Fear of death, because diabetes starts with the sound “die” or they know of someone who had diabetes and died.

These reactions may prompt your child to act with hostility toward you, feeling that somehow you have failed him or her. Because children think their parents/guardians are all-powerful, your child may believe you can make the diabetes go away and may subconsciously resent the fact that you don't.

Self-Care and Your Care

One of your most important jobs as the parent/guardian of a child with diabetes is to supervise, encourage, and foster the independence your child needs to successfully manage diabetes. Try to avoid being overprotective. Overly protective parents/guardians undermine a child's self-confidence. Instead of developing a feeling of mastery over his or her environment, the child may develop a “sickly” self-image or use diabetes as a means to engage in manipulative or “acting out” behavior.

Self-care is the key to the development of a child's independence and self-esteem. This point cannot be overstated: you must get your child involved in self-care as soon as he or she is able to master self-management tasks and is emotionally ready. At the same time, supervision by caregivers must continue.

Tools and Information for Parents/Guardians - Juvenile Diabetes Research Foundation

Teenagers and Diabetes

Adolescence is a tough time for all kids — and their parents/guardians. Teenagers with diabetes carry extra burdens. As the parent/guardian of a teenager with diabetes, expect some change.

That child who was always so good about diabetes management may suddenly rebel against the routine. He or she may refuse to monitor blood sugar levels, go on food binges, be evasive about test results. Your teenager may be grumpy, angry, distant.

The Psychological Challenges: Sexual Identity, Independence, Self-Care

Sexual identity and independence are challenges for many teens — and their parents/guardians. For teenagers with diabetes, they present some special issues. The demands of self-care also can create unique pressures. To develop a sexual identity, a person has to accept his or her own body. While this is difficult for all teenagers, diabetes makes it even harder. After all, successful people in movies and on TV are shown as young, beautiful, and physically perfect. Teenagers with diabetes know they're not perfect. They wonder if they'll be accepted by the opposite sex and by their peers.

Sometimes, fear of rejection will cause them to isolate themselves from their peer group. But isolation is even worse for self-esteem. If this happens to your child, you should try to break this potentially damaging cycle.

To achieve independence, teenagers often form bonds with their friends. But peer groups require conformity, and conformity creates conflict for teenagers with diabetes. How can they act just like their friends (for instance, stopping for pizza

after school) and still keep control of their diabetes? Helping your child feel comfortable with the boundaries of his or her diabetes management program can be a positive step in dealing with peer pressure.

Adolescents are expected to become totally self-sufficient in their diabetes routine. While this self-reliance helps build confidence, for some it creates another kind of pressure and anxiety. When their blood sugar levels go out of control — in spite of their best efforts — they may feel frustrated, weak, and inadequate. They may react in one of two ways: denial of the disease, or with aggressive behavior, which may be acted out through food binges or skipping their insulin.

It is important that you and your teenager understand the dynamics of blood sugar during the teenage years.

The Physical Challenge: Blood Sugar Control

One of the most frustrating and persistent problems during adolescence is the inability to control blood sugar. Research has shown that physiological changes are at work. It is believed that a hormone called Growth Hormone (GH), which stimulates the growth of bone and muscle mass during puberty, also acts as an anti-insulin agent. Moreover, falling blood sugar stimulates the release of adrenaline, which in turn triggers the release of stored glucose. The result: blood sugar levels that swing from too low to too high.

You and your teenager should both realize that poor blood sugar control is not all his or her fault.

Tools and Information for Parents/Guardians - Juvenile Diabetes Research Foundation

Tips for Helping Your Teenager

Understanding and recognizing the limits of your control are key elements in helping your teenager with diabetes work through the challenges of adolescence. Three areas of special importance are:

- **Understand the Need for Spontaneity.** Teens want to be spontaneous — to be able to do things, eat things, try things. Diabetes requires the opposite. A teen with diabetes must realize that freedom only comes with knowledge and responsibility. Only by fully understanding and controlling his or her diabetes can a teen achieve the flexibility he or she craves.
- **Understand the Need for Control.** Teens want to be masters of their own lives. They want to define their own identities. To accomplish these objectives, they have to keep testing their limits. You can help show how they can use the discipline and control of diabetes care to gain strength and mastery in other parts of their lives.
- **Recognize the Limits of Your Control.** Be realistic. Accept the fact that you can't watch over your teen every minute of the day. You, too, have to learn that it's your child's diabetes, not yours.

By no means do these suggestions mean you should turn your back on your teen and allow him or her to self-destruct. You can talk with your child about the choices he or she is making. Talk about grown-up matters, like career, marriage, and alcohol. Talking with your teenager shows you think of him or her as an adult and helps keep the lines of communication open during this difficult period.

Get your child involved in diabetes support groups and diabetes camps, where he or she can meet other teens with diabetes. If you believe your child is in serious trouble, don't be embarrassed about seeking professional help.

Parents/Guardians and Diabetes

Your child isn't the only one struggling with the emotional challenge that diabetes presents.

You are too, and you need support — because it will help you and because it will help your child.

You're not alone in your struggle, and there's no reason to feel alone. Get involved in support groups and diabetes organizations. Your child will benefit from being around other young people with diabetes, and you will benefit from sharing information and insights with other parents/guardians who know the pitfalls, frustrations, and anxieties of a life with diabetes.

****** The information provided here is not intended to take the place of medical advice. For guidance on topics discussed, consult your health care professional.

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Tools and Information for Parents/Guardians - Parent Responsibilities and Legal Accommodations



Parent/Guardians of Children with Diabetes Have Responsibilities Too

- Complete the Individualized Emergency School Health Plan and Individualized Health Care Plan for Diabetes Management
- Provide the school with:
 - Medication supplies
 - Snacks, if required on a regular basis or for special occasions
 - Blood glucose meter and/or supplies. These can be kept at school, or brought daily.
 - Urine ketone testing supplies
- For the child using an insulin pump
 - An alternative method of insulin administration in case of insulin pump failure.
- The child with diabetes needs to have quick sugar emergency supplies with him/her at all times. He/she should carry something like:
 - Juice
 - Jelly Beans
 - Glucose tablets
 - Raisins
 - Glucose gel
 - Cake gel
- Prepare extra snacks to keep at school in case they are needed. An old lunch box or a shoe-box labeled with your child's name works well as a container. Include snacks such as:
 - Crackers
 - Graham Crackers
 - Peanut Butter
 - Granola Bars
 - Raisins
- Or provide school with a special occasions food list.



Appropriate Accommodations Under Law

Any school receiving federal funding must accommodate the special needs of its students in order to assure them a “free, appropriate public education.” Such accommodations should be documented in either an individualized health plan, a Section 504 of the Rehabilitation Act of 1973 plan, or in an Individualized Education Program (IEP).

Work with the school in establishing written documentation of accommodations explicitly detailing the specific needs of your child with diabetes.

Some issues that a written plan might include:

1. Eating whenever and wherever necessary.
2. Going to the bathroom or water fountain as needed.
3. Participating fully in all extra-curricular activities, including sports and field trips.
4. Eating lunch at an appropriate time with enough time to finish eating.
5. Accommodating absence related to medical visits.
6. Assisting with blood glucose monitoring or insulin injections, where appropriate.
7. Providing opportunity to make up missed schoolwork or receive additional instruction when absent

These are examples of some of the things to include in an individual plan.

Consult members of your child's health care team when determining individual recommendations.

Tools and Information for Parents/Guardians - Legal Accommodations

Parents'/Guardians' Rights

As the parent or legal guardian of a child with diabetes in the public school system, you have the right:

1. To request that your child be found eligible for special services if required.
2. To schedule a meeting with school officials to develop an individualized health plan, an Individualized Education Program (IEP) under Individuals with Disabilities Education Act of 1991 or a Section 504 accommodation plan to address your child's specific needs.
3. To bring experts to this meeting to better explain your child's diabetes management.
4. To develop an IEP or Section 504 plan to accommodate the unique requirements of your child. This plan may precisely set out the types of special related services your child needs to receive.
5. To not sign a plan unless it conforms to your child's medical needs. The law requires that all parties agree to the individual plan before it is established. Be reasonable, but stand firm.
6. To be notified and agree to any proposed changes in your plan.

Education

Educating the school personnel about your child's individual needs is an important step. The process of developing an individualized health plan, an IEP or Section 504 plan educates the school staff about diabetes and how it affects your child. Establishing an individual care plan that meets your child's needs will require close communication between you, your child's doctor and the school. It may involve some negotiation, but remember it is your right to request and receive reasonable accommodations to ensure that your child receives a free appropriate public education.

Wisconsin is a local control state. This means that the local school district board is the governing body for the school district, and as such, must develop policies and procedures that comply with federal and state regulations. In doing so, school boards must meet all of the requirements of the laws, but are free to decide how they will implement the law depending on the desires and resources of their community. If you have concerns with the care of your child while in school, you should first meet with the school nurse, then your school principal. If you need further assistance, contact the district-wide Director of Pupil Services and/or the Director of Special Education. Finally, if you need additional assistance, contact the School District Superintendent, then the School Board and the Coordinator of 504 Plans. Often schools have a formal process for voicing concerns or complaints in a student/parent/guardian handbook or check with your school district office for their procedure.

T Tools and Information for Parents/Guardians - Age-Related Responsibilities of Children



Age-Related Responsibilities of Children

Age alone should not be the guideline used to assume that a child is ready to accept responsibility for managing components of diabetes care. It is important to realize that children develop at different rates. There is no such thing as the “magic age” when a child suddenly can perform a certain skill or be responsible for their care. Children need to be encouraged and supported to gradually assume diabetes self-care as they mature and demonstrate confidence. The adult must be sure that when the responsibility is given, the child is willing to take it. Keep in mind that a child’s ability or desire to perform certain diabetes-related

tasks might vary from day to day. It is normal for the child to regress and temporarily depend once again on an adult to handle the responsibility. Parents/guardians, school nurses, relatives and other reliable adults must be sensitive to the child’s needs and be available to take over with no questions asked.

The charts below provide the parent/guardian with guidelines to follow when determining the average age for assuming various diabetes-related skills. Keep in mind that these are general recommendations and each child must be evaluated individually. Independence takes a long time and requires a lot of help and supervision from adults. Children who feel that they have a network of adults to support and assist with diabetes management will generally be in better diabetes control.

Responsibilities of Children at Different Ages

Be aware of different stages in normal childhood development. Recognize that responsibilities related to diabetes must depend on the age and development of the child.

Age	Non-diabetes-related	Diabetes-related
3 – 7 years	<ul style="list-style-type: none"> • Imaginative/concrete thinkers • Cannot think abstractly • Self-centered 	<ul style="list-style-type: none"> • Parent supervision for all tasks • Gradually learns to cooperate for blood sugar tests and insulin shots • Inconsistent with food choices • Gradually learns to recognize hypoglycemia • Not much concept of time
7 – 12 years	<ul style="list-style-type: none"> • Concrete thinkers • More logical and understanding • More curious • More social • More responsible 	<ul style="list-style-type: none"> • Can learn to test blood sugars • At age 10 or 11, can draw up and give shots on occasion • Can make own food choices • Can recognize and treat hypoglycemia • By 11 or 12 years, can be responsible for remembering snack, but may still need assistance of alarm watches or parent reminders
12 – 18 years	<ul style="list-style-type: none"> • More independent • Behavior varies • Body image important • Away from home more • More responsible • Abstract thinking 	<ul style="list-style-type: none"> • Capable of doing the majority of shots and blood tests but still needs some parental supervision and review at times to make decisions about dosage • Knows which food to eat • Gradually recognizes the importance of good sugar control to prevent later complications • May be more willing to inject multiple shots per day

Tools and Information for Parents/Guardians - Psychosocial Aspects of the Child with Diabetes



Psychosocial Aspects of the Child with Diabetes

The diagnosis of diabetes in a child can have a major impact on the entire family. In many cases, diabetes is the worst thing that has ever happened to them. Each individual in the family is affected and the feelings experienced often follow a similar pattern. These feelings may linger for a long time if they are not recognized and expressed. Dealing with feelings openly can help the child and the family learn to face the daily challenges and facilitate an acceptance of having diabetes as part of their family. The feelings described are present in all families who have a child with diabetes.

Denial

“This can’t really be happening.”

“I don’t need to take my insulin today.”

“It’s not that serious.”

“No one has to know I have diabetes.”

The child or family member may find it difficult to even talk about diabetes. It may be too painful to face. This can interfere with the medical team’s ability to educate and treat the child. At times, the child or the parent/guardian may try to hide their feelings to be “strong” or not to upset the others. This denial may make the child’s ability to adjust to the daily struggles much more difficult.

Sadness

The child or family member may cry, feel depressed, or hopeless. Feeling sad is normal and brief periods of sadness can occur for years after diagnosis. It is important for the child or family member to express their sadness and to openly

share their feelings. They should be encouraged to seek professional help if they feel depressed or hopeless for a long period of time.

Anger

“Why me? or Why my child?”

“Why do I have to do it all?”

“It isn’t fair!”

Anger may be vented toward nurses, doctors, God, spouse, friends, siblings, teachers, the list is endless. Although this also is a normal feeling, it may interfere with the child or the family member’s ability to adjust to the daily pressures of managing diabetes. If it is having a major impact on the child or the family as a unit, individual counseling may be helpful.

Fear

“What will this mean for my child’s life?”

“What’s going to happen?”

“How can we ever leave him alone?”

There are so many fears that are expressed by the family and the child. Parents/guardians fear the increase in responsibility, the expenses, they worry about the future and doubt their ability to manage diabetes every day. Siblings fear they may “get” diabetes too. The child fears hospitals, injections, fingersticks, low blood sugars and even death. He/she may feel so different from friends. All these fears are certainly justified, but can be allayed if they are openly discussed and support given as needed.

Tools and Information for Parents/Guardians - Psychosocial Aspects of the Child with Diabetes

Guilt

“What did I do to deserve this?”

“If I just hadn’t eaten so much sugar.”

“The diabetes may have come from my side of the family.”

Parents/guardians commonly feel that they “gave” their child diabetes. This idea occurs even though we know other factors also play a role in the onset of diabetes. The child may feel diabetes is a punishment for bad behavior. These feelings are very common at the time of diagnosis. As time goes on, the child feels guilty if he/she “sneaks” extra candy, skips doing blood tests, lies about blood sugar results or does not “follow the rules.” Parents/guardians feel guilty whenever they have to enforce the “rules” of self-management or deny their child a “treat.” The opportunities to feel guilty are always there. Parents/ guardians and children need to be supported in their efforts each day.

Acceptance

“I don’t like having diabetes but I guess I can handle it.”

“The shots aren’t so bad, I just wish I could eat whatever I want.”

This stage may take a long time to reach and some may never come to accept diabetes as part of their life. A well-adjusted family learns to cope with the endless demands and struggles diabetes can add to their life. They feel more confident and hopeful. Sadness and anger may still occur but these periods are temporary. The family needs to seek out resources in the community and within their family to ease the burden of daily management. Dealing with all of these emotions

can be a challenge for the family with diabetes. They must come to the understanding that diabetes should not prevent a child from living a full and active life. They are not alone...there are many resources available in the community and many other families traveling the same road.

Adapted from:

“Understanding Insulin-dependent Diabetes” University of Colorado Health Sciences Center, 1995.



Factors Causing Emotional Distress at Diagnosis of Diabetes in a Child

- Uncertainty about the outcome of the immediate situation
- Feelings of intense guilt and anger about the occurrence of diabetes
- Feelings of incompetence and helplessness about the responsibility for management of the illness
- Loss of valued life goals and aspirations because of illness
- Anxiety about planning for an uncertain future
- Recognition of the necessity for a permanent change in living pattern due to diabetes



Tools and Information

for School Nurses, Parent/Guardians and School Staff



Tools and Information - Chapter Guide

- **Care Planning**
 - Parent/Guardian Conference
 - Parent/Guardian Check List
 - Planning Meeting
 - Individual Care Plan
 - Training
- **Documentation of Instruction From Registered Nurse to Unlicensed School Personnel Form**
- **Effect of Illness/Injury on Diabetes Control**
- **Field Trips**
- **Frequently Asked Questions About Roles and Responsibilities in Relation to Nursing Procedures and Health Related Activities for Children in the School Setting**



Care Planning

Care planning in the school has four components:

Parent/Guardian Conference

A conference with parents/guardians and the school nurse to identify the child's needs, discuss components of the care plan, and develop the agenda for a school wide planning meeting. This meeting may be held with parents/guardians, the principal, the school nurse and others who may be invited by one of these parties.

The purpose is to get to know one another, share information about the child and school, prepare for the initial planning meeting, and determine who will need to attend the planning meeting.

A sample Parent/Guardian Check List is included. Parents/guardians may find this useful when preparing for the parent/guardian conference.

Parent/Guardian Check List

This checklist is provided to help parents/guardians identify the forms, supplies and other materials they need to bring to school. The list needs to be modified for individual children. All items on the checklist should be sent to the school nurse.

- | | |
|--|---|
| <input type="checkbox"/> Data/Information form | <input type="checkbox"/> Record-keeping sheets |
| <input type="checkbox"/> Photograph of child | <input type="checkbox"/> Insulin and related supplies: |
| <input type="checkbox"/> Signed release of information for physician(s) | <input type="checkbox"/> Syringes, alcohol, etc. |
| <input type="checkbox"/> Monitoring supplies: Lancets, meter, strips, alcohol swabs, ketone strips, etc. | <input type="checkbox"/> Prescription Medication Order and Permission form for insulin administration |
| <input type="checkbox"/> Snack packs. Number: _____ | <input type="checkbox"/> Glucagon kits.
Number: _____ |
| <input type="checkbox"/> Glucose tablets, Gel (tubes). Number: _____ | <input type="checkbox"/> Prescription Medication Order and Permission form for Glucagon |
| <input type="checkbox"/> Pump Supplies (if applicable) | |

Adapted from Vermont Manual — Recommendations for Management of Diabetes for Children in School

Tools and Information for School Nurses, Parents/Guardians and School Staff - Care Planning

Planning Meeting

This meeting of key staff should be held before the school year starts, or when a child is newly diagnosed. The school nurse in the school district should organize and facilitate a planning meeting to develop an individual diabetes care plan for use in the school setting. Meeting participants should include everyone that may have a role in the child's diabetes care. Participants may include:

- Family and child
- Principal
- School nurse
- Current year classroom teacher(s)
- Past year classroom teacher(s)
- Food service manager
- Physical education teacher/coach
- Counselor or Social Worker
- Bus driver
- Other school staff with direct responsibility for child
- Members of the health care team, if invited by parents/guardians

Suggested agenda items:

- Overview of Type 1 and/or Type 2 diabetes and its management
- Discuss specific care of individual child
- Roles and responsibilities of staff members
- Identify staff in the school who will serve as resources for others
- Determine the hierarchy of personnel expected to respond in emergency situations
- Determine the location of food kits, Glucagon, and other supplies in the school building

- Determine where the plan will be kept and how individual components will be shared with appropriate staff
- How training for staff with specific responsibilities will be done
- What is an emergency and what to do

Individual Care Plan

The School Nurse, using information gathered at the planning meeting, should prepare the written plan. The plan may be incorporated into a "504" plan, if the child's needs will be covered by this legislation, or in an individualized health plan. See "Appropriate Accommodations Under Law" later in this chapter for a description of legislative rules that may apply to children with diabetes. The school nurse, in collaboration with parents/guardians and others, develops this care plan outlining specific health care to be given to the student. It should be available to all staff working with the child. The school nurse may prepare a summary of pertinent information on the individual child for their use and provide it to each of the child's teachers.

Routine daily care may include:

- Blood glucose monitoring routine
- Phone numbers of parents/guardians, health care providers and emergency contacts
- Blood glucose values and specific responses required
- Daily schedule of food, insulin and activity
- Special events/circumstances
- Location of supplies and food
- Disposal of syringes, lancets, etc.
- Developmental levels and cognitive and physical abilities of the school-aged child and adolescent should be incorporated in the care plan for the child with diabetes

Tools and Information for School Nurses, Parents/Guardians and School Staff - Care Planning

Training

The school nurse should arrange for training of school staff. The nurse should do the training with the assistance of the child's parents/guardians and/or invited members of the child's health care team.

Suggested Components of Training:

- Introduction to the child's individual care plan
- Type 1 diabetes: what it is, how it is managed (if not covered at planning meeting)
- Type 2 diabetes: What it is, how it is managed (if not covered at planning meeting)
- Monitoring tools: glucose meter, written records, etc.
- Signs and symptoms of hypoglycemia and hyperglycemia
- Procedures for routine care of the individual student
- Emergency procedures
- Overview of universal health and safety guidelines (OSHA) and guidelines for disposal of supplies
- Monitoring techniques (for those who may do finger sticks)
- Glucagon administration (for those named in the emergency plan)
- Insulin administration (if in the plan)

*Adapted from Vermont Manual —
Recommendations for Management of Diabetes
in School.*

NOTE: A list of internet links and publications that may help the school staff with care planning is included in the Appendix section at the end of the manual.

**DOCUMENTATION OF INSTRUCTION FROM REGISTERED NURSE TO
UNLICENSED SCHOOL PERSONNEL**

Student Name _____ Date of Birth _____

School _____ School Year _____

Staff Member Name _____

Has been instructed in the following procedure(s):

Dates	Staff Initials	R.N. Initials	Procedure	Comments

The staff member has satisfactorily demonstrated the ability to carry out the procedure(s) safely. Both the staff member and the Registered Nurse have agreed that the task can be safely monitored with periodic supervision. Therefore the above named person agrees and states that: "I have received training in the procedure(s) initialed above and am capable, willing, and physically able to perform the procedure(s) as per written guidelines."

Signature of Staff Member trained _____ Date _____

Follow-Up Training and Supervision:

Dates	Staff Initials	R.N. Initials	Comments

Date	Signature of RN	Date	Signature of RN

Tools and Information for School Nurses, Parents/Guardians and School Staff - Effect of Illness/Injury & Fieldtrips



Effect of Illness/Injury on Diabetes Control

- Illness places stress on the body and usually will have the effect of raising blood glucose levels.
- Flu-type illness with nausea, vomiting and/or diarrhea can upset the electrolyte balance of the body, causing dehydration and possibly ketoacidosis.
- Injuries also place stress on the body and can have the effect of raising glucose levels.
- Hypoglycemia may occur anytime a child cannot maintain normal oral intake.

Responsibilities of School Personnel if a Child with Diabetes Becomes Ill at School

- If possible, determine the student's blood glucose level.
- In cases of injury, administer the usual first aid measures as well as determining the blood glucose level.
- If the glucose level is low or the student is showing symptoms of hypoglycemia, have the student take about 1 oz only of a **regular soda** at 15 minutes intervals. Small, frequent sips are often tolerated even by a student with nausea or vomiting.
- If the glucose level is high, or if symptoms of hyperglycemia are present, the student can be given sips of water or **sugar-free soda**. If possible and if ordered, check for the presence of urine ketones.
- Notify the parents/guardian of the student's symptoms, injury and blood glucose level. If unable to reach a parent/guardian, call the student's health care provider.
- If respiration is deep and labored, and if the student's breath smells fruity or like alcohol, the student may have ketoacidosis. Report to the parent/guardian or health care provider **immediately**.

- Give comfort measures as you would with any student without diabetes.
- **If the student is unconscious, unresponsive, uncooperative, or severely injured, call 911 immediately and call the child's parent/guardian. Refer to the child's Emergency School Health Plan for further instructions.**



Field Trips

Students with diabetes must be allowed to participate in all school activities including school field trips. Some advanced planning is required to create a safe environment. School staff that are trained in diabetes care should accompany any child with diabetes on field trips. Bus drivers and chaperones should be informed that the child has diabetes and may need to check blood sugar, take insulin, or eat a snack on the bus or during the trip. Supplies needed on any field trip include:

- Cell phone or other means for getting help in an emergency
- Copy of the Emergency School Health Plan which includes emergency phone numbers
- Glucose monitor and supplies
- Insulin if needed during the time of the trip
- Quick-acting sugar to treat hypoglycemia if needed
- Extra snacks
- Glucagon Emergency Kit
- **A field trip can be associated with extra activity and excitement for a child. These can cause a low blood sugar, and chaperones and staff need to be alert for this and treat accordingly. In lieu of trained school staff, a parent/guardian may accompany their child on the trip, however, they cannot be required to do so.**

Tools and Information for School Nurses, Parents/Guardians and School Staff - Frequently Asked Questions



Frequently Asked Questions

About Roles and Responsibilities in Relation to Nursing Procedures and Health-related Activities for All Children in the School Setting.

The information in this manual is general in nature, and does not constitute specific medical or legal advice. Readers should consult directly with medical professionals regarding specific questions about care of children with diabetes. Readers should consult with legal counsel regarding questions pertaining to the rights and/or responsibilities under state and federal law of any individual or institution receiving or providing care for children with diabetes.

1. What is the “nurse practice act?”

As in most health care professions, the profession of nursing requires certain knowledge and skills as well as a license to practice. The nurse practice act is found in Chapter 441 of the Wisconsin Statutes and defines nursing practice in the state of Wisconsin, describing what a registered nurse (RN) and licensed practical nurse (LPN) can do and how it must be done. The associated rules for the practice of nursing are found in Chapters N6 and N7 of the Wisconsin Administrative Code. A complete copy of the statutes and administrative code can be viewed at www.legis.state.wi.us/.

2. Do Wisconsin public school districts have to have a school nurse?

Wisconsin public school districts are not required to employ a school nurse. However, Wisconsin school district standards, 121.02(1)(g) direct

schools to provide for emergency nursing services and PI 8.01(2)(g) of the Administrative Code states that schools must provide these services under a written policy adopted and implemented by the school board. The policies must be developed by a registered nurse. School districts are required to have a physician advisor. Other state and federal laws dictate situations where a school district must have a registered nurse. For example, if a student requires a nursing procedure that can only be performed or delegated by a registered nurse the district would have to hire or contract with a registered nurse.

3. Do public schools have to follow similar procedures and provide health services in a consistent manner from school district to school district?

Wisconsin is a “local control” state. Basically, this means that the local school board is the governing body for the school district, and as such, must develop policies and procedures that comply with federal and state regulations. In doing so, the school board must meet all of the requirements of the laws, but is free to decide how they will implement the law depending on the desires and resources of their community. The school district is free to go beyond the requirements of the law as long as the basic requirement is met.

For example, a district is not legally required to employ a registered nurse, but many do. This may be because they recognize that health services are complex and have chosen to employ a registered nurse to provide and/or direct those services. The community may also have said that this is what they want for their children.

Another example is the school medication law. The law allows individuals without a health care

Tools and Information for School Nurses, Parents/Guardians and School Staff - Frequently Asked Questions

license to administer medication to a student if all the conditions in the law are met. However, a school board may decide that only a nurse will administer medication to students.

4. Do private/parochial schools have to have a school nurse?

If a private school receives federal funds for any of its programming, the school is required to comply with federal law and accommodate a student with special health needs. If a private school does not receive federal funding, the school is not required to provide accommodation. Regardless of the federal funding issue, if that same student required a procedure that only a registered nurse can legally perform or delegate, the school would have to arrange for a registered nurse if they agreed to accommodate the student. As with public schools, the private school can also go beyond what the law requires and agree to provide the accommodation or allow a parent/guardian to provide or arrange and pay for an appropriate individual to provide the care.

5. When a preschool program or day care is located in a public school building, is the school responsible for providing health services to the children enrolled in such programs?

If a preschool or daycare program is operated by the public school district, the school district is responsible for providing health services unless other coverage has been arranged. When private agencies are renting space in a public school building, the school district and/or school nurse are not responsible for providing health services for a child in that preschool or daycare, even if that same child attends the school during the

regular school day. The school district would only be responsible for health services provided during the school day or during school sponsored activities.

6. Does the Nurse Practice Act apply to the delivery of health services for children attending preschool programs, day care centers, summer programs, residential programs, and camp programs?

The Nurse Practice Act applies to all license holders of the RN or LPN licenses, in any setting in which they practice, including a volunteer position. Different settings may have policies and procedures that govern activity in that particular setting. However, the state law and administrative rules governing the practice of nursing in the state apply in all settings. A school district, day care setting, or another agency or organization cannot do less than what the law requires.

7. Is a public school legally obligated to provide nursing services to students in a private school?

Generally, public school districts are not required to provide school nursing services to students placed by their parent/guardians in private schools. However, a public school district may be legally obligated to provide those services in relatively rare instances where a student in need of special education is placed in a private school because the public school cannot provide the “free appropriate public education” required by the Individuals with Disabilities in Education Act. In those cases, the public school district would be obligated to provide the supplementary aids and related services, including nursing services,

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required by the IEP. For more information you can access DPI Information Bulletin number 99.07, *Parentally Placed Private School Children with Disabilities* at the DPI Special Education web site, <http://www.dpi.state.wi.us/dpi/dlsea/een/bul99-07.html>.

8. What is nursing delegation?

When a Registered Nurse delegates the performance of a nursing act (task) to an unlicensed individual, it involves more than training and supervising the unlicensed person to perform the act (task). The Registered Nurse retains the legal responsibility for the performance of the act. The Board of Nursing addresses the question of delegation of nursing acts to Licensed Practical Nurses and unlicensed persons in chapter N6 of the board's code. Wisconsin Administrative Code section N6.03(3) states as follows:

(3) SUPERVISION AND DIRECTION OF DELEGATED NURSING ACTS.

In the supervision and direction of delegated nursing acts, an RN shall:

- (a) Delegate tasks commensurate with educational preparation and demonstrated abilities of the person supervised;
- (b) Provide direction and assistance to those supervised;
- (c) Observe and monitor the activities of those supervised; and
- (d) Evaluate the effectiveness of acts performed under supervision.

As may be seen from the foregoing, the question is not whether any particular nursing act may be delegated to an unlicensed person, but rather what degree of direction, supervision and control is required in order to ensure that the patient services are competently and safely provided. That determination must usually be made by the

delegating RN, and would depend primarily on the RN's confidence in the delegate's competence.

There are two principal exceptions to the rule, the first being performance of IV therapy, including starting peripheral IV lines, adding medication to the intravenous fluids, monitoring of intravenous fluids which carry medication, and monitoring intravenous fluids for hydration purposes.

It is the opinion of the Board of Nursing that delegation of these nursing acts requires direct supervision, and the board has interpreted direct supervision, as defined in section N6.02(6), Wis. Adm. Code, as necessitating on-site supervision. Accordingly, the RN supervising the LPN in the performance of IV therapy must be physically present in the facility and immediately available. It should be added that it is not the board's intent that observation of IV infusions on controlled infusion pumps by the LPN requires direct supervision. If the RN pre-programs the IV infusion on a controlled pump and performs the client assessment, then the LPN may monitor the infusion under general supervision of the RN and report any concerns or problems with the infusion to the RN.

A second exception to the general rule permitting delegation of nursing acts is nursing assessment and evaluation. LPNs and less-skilled assistants may assist the RN in these functions, but may not perform them in their entirety.

While employers and administrators may suggest which nursing acts should be delegated and/or to whom the delegation may be made, it is the RN who makes, and is ultimately responsible for making, the decision whether, and under what circumstances, the delegation occurs. If the RN decides that the delegation may not appropriately or safely take place, then the RN should not engage in such delegation. In fact, if the RN

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decides that delegation may not appropriately or safely take place, but nonetheless makes the delegation, he or she may be disciplined by the board for negligent practice, as defined in Section N7.03, Wisconsin Administrative Code.

Finally, a prospective delegate is not required to accept a delegated nursing act, even though such delegation may be appropriate given considerations of education, training or experience. The prospective delegate should be required, however, to immediately inform the supervising RN of any refusal to accept the delegation.

9. Is there a Wisconsin law pertaining to medication administration in the schools?

Wisconsin has two laws specifically related to medication administration in the schools, Wisconsin Statute section 118.29 and 118.291. The first, 118.29, is the general law, and 118.291 is the asthma inhaler law (allows responsible student to carry their inhalers for asthma).

The general medication law, Wisconsin Statute section 118.29, allows public school employees, volunteers, school bus drivers, and CESA employees and volunteers to administer medication to a student if they are authorized to do so in writing by the school board, school administrator, or school principal. The law includes private school employees and volunteers, who also must be authorized in writing to do so by their administrator or principal.

To administer a drug that is lawfully sold over the counter without a prescription, the school must have written consent and written instructions from the student's parent/guardian. Before a school can administer a prescription drug to a

student they must have written instructions from a health care practitioner licensed by the state to prescribe medication. The parent/guardian's written consent is also required before a school can administer a prescription medication.

Authorized individuals are immune from civil liability in administering medications as long as their action or omission does not constitute a high degree of negligence. The administrator that authorizes the individual to dispense the medication is also immune from civil liability. However, the civil immunity is not extended to licensed or certified health care professionals, including registered nurses, licensed practical nurses, and emergency medical technicians (EMT).

The medication law also states that the governing body of the school must adopt a written policy governing the administration of drugs. In developing the policy, the governing body must seek the help of a health care professional contracted or employed by the school. The policy must address:

- Procedures for obtaining and filing the written instructions and required consents
- A periodic review of such instructions
- Storage of the drugs
- Record keeping
- Instruction of persons authorized to administer medication

The law concludes by saying that no employee except a health care professional may be required to administer a drug by any means other than ingestion.

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10. Can a school accept a telephone order for a medication from a licensed health care provider or parent/guardian?

The school medication law specifically says WRITTEN instructions and consent are required. There are several reasons for this, but the main reason is that there is generally no way to verify the identity of a person calling in a medication order. It therefore presents a safety concern. The written instructions and consent, however, can be generated and sent electronically.

The school medication law makes exception for licensed health care professionals in several ways, including telephone orders from a licensed health care provider. According to the Board of Nursing, a Registered Nurse MAY accept a telephone order from a licensed health care provider, but NOT from a parent/guardian.

11. Does Wisconsin Statute Section 118.29 apply to private schools?

The law includes private school employees and volunteers that are authorized in writing by their administrator or principal to administer medication. The private school must follow all requirements listed in 118.29 as well.

12. Does Wisconsin Statute Section 118.29 address the administration of medications given on an “as needed” or emergency basis?

For the most part, any medication would either be a prescription or non-prescription (over-the-counter) medication. Therefore, the requirements for medication given on an “as needed” or emergency basis would be included under the requirements for non-prescription or prescription medications. Both require written instructions from

parents/guardians and in the case of prescription medications, written instructions of a licensed health care provider. The written instructions should include under what circumstances the drug is to be given.

In addition, there are specific references in the law to two emergency situations, a severe allergic reaction, and a severe hypoglycemic event. Both situations can result in the death of an individual if emergency drugs (epinephrine for allergic reactions and glucagon for hypoglycemic events) are not administered in a timely manner. The law is written to reflect the significance of these situations and the reality that more harm will come from inaction (not giving the required drug) than is possible by giving either drug, even if the drug proved to be unnecessary. Therefore, the law provides additional protection to individuals that administer epinephrine via an epinephrine auto-injector to a student experiencing a severe allergic reaction, and to individuals who administer glucagon to a pupil who appears to be experiencing a severe hypoglycemic event as long as the individual reports the event as soon as practicable to the emergency medical services provider.

13. How does Wisconsin Statute section 118.29 differ from the nurse practice act?

The school medication law, 118.29, is the only Wisconsin state law that allows individuals who are not licensed in a health care field to do what would otherwise be considered the practice of nursing, that is, administer medication to a non-family member. The medication law has very specific restrictions as to how medications can be administered to ensure safety.

Tools and Information for School Nurses, Parents/Guardians and School Staff - Frequently Asked Questions

14. What is the school district's responsibility related to the provision of nursing procedures and health services for students who participate in field trips and other school sponsored extracurricular activities?

Section 504 of the Rehabilitation Act of 1973 and the Individuals with Disabilities Education Act require school districts to ensure that students with disabilities have an equal opportunity to participate in nonacademic and extracurricular activities which are available to other students enrolled in the public schools of the district. To ensure the participation of students with special health needs, school districts must make appropriate health services available during field trips and other school sponsored activities.

In addition to the federal laws, Wisconsin Statute 121.02(1)(g) School District Standards directs schools to "provide for emergency nursing services" and Wisconsin Administrative Code, Chapter PI 8.01(2)(g)4 School District Standards states that these services "shall be available during the regular school day and during all school sponsored activities of pupils." The laws do not specifically address the how or who, but in general terms the school district has the responsibility to provide accommodations and related services, including a process for performing necessary health-related procedures and medication administration, that enable a student to participate to the maximum extent appropriate based on his/her unique needs in all aspects of education, including field trips and after-school activities. Therefore, a student's health plan should include a plan for any and all aspects of the school sponsored activities, including who will do what and how.

When a student is unable to perform a necessary health-related task independently and the task is a nursing procedure, the district must provide an appropriately licensed health care person to perform the task or have the licensed person delegate the performance of the procedure to a trained unlicensed person.

15. How should school districts handle the issue of medications when students go on field trips or participate in after-school activities?

As stated in the preceding question and answer, school districts are required to provide the necessary health-related procedures, including medication administration, that enable the student to access and experience all aspects of a public education. School districts should have the same level of policies and procedures for medication administration during these activities as they do for medication administration during the school day, including where the medication will be stored or kept, who is authorized to administer the medication, and a system to document the administration. Even if the student is self-directed in administering their own medication, most districts have policies that all medication needs to be under the control and supervision of an adult. Thus, for field trips or after-school activities, teachers or other school staffs usually carry the self-directed student's medication so the student can take his/her own medication at the appropriate time and document it. For students who are not self-directed, the parent or guardian may attend the activity and administer the medication, but the school has the ultimate responsibility to ensure that a responsible individual is available to administer the medication.

Tools and Information for School Nurses, Parents/Guardians and School Staff - Frequently Asked Questions

16. Can a licensed practical nurse (LPN) provide school health services as long as supervision is provided?

LPNs may be hired to perform nursing tasks permitted in the LPN scope of practice. The LPN scope of practice, however, requires that a LPN practice under the supervision and direction of a registered nurse, physician or dentist. Thus, the tasks must either be part of a student's individualized health care plan that is developed, maintained and evaluated by a school nurse (RN delegated), or under practice protocols developed by the school nurse and medical advisor. Direction does not necessarily need to be on site, but evidence of adequate supervision (which must include, at a minimum, availability of the registered nurse, physician or dentist by telephone) is essential.

17. Are school districts authorized to employ an Emergency Medical Technician (EMT) instead of an RN to provide health care to children with special health needs?

An EMT may be hired as a health aide, and if appropriately trained and supervised, may perform health-related procedures under the delegation of a registered nurse. However, an EMT, just like any other state licensed health care provider, must follow the laws and rules that govern the practice for which they hold a license. An EMT is licensed to provide pre-hospital first-aid under specific guidelines and supervision of a physician. If an EMT is employed as a health aide in a school, the EMT would be held to the standards of their EMT license as well as the standards of care of the tasks in their job description.

18. Can a school staff person without a health care license administer any type of medication, including injections, to students?

Although the medication law specifically says that school staff "...may not be required to administer a drug or prescription drug to a pupil ... by any means other than ingestion," it does allow school staff (employee, volunteer, school bus driver, etc.) to administer medication by any means as long as all of the conditions of the law are met. The staff must be authorized in writing, they must receive appropriate training, and must volunteer to do so.

19. Under what circumstances may an administrator require an employee to be trained and to administer non-oral medication?

Administrators may make administration of non-oral medication a condition of an individual's employment if (1) the employee was notified at the time s/he applied for the job and accepted the position that administration of non-oral medication and other health care services would be part of his/her job duties; or (2) in districts where the employees are covered by a collective bargaining agreement, the district bargains with the employees' collective bargaining representative prior to adding such a condition of employment to current employees' job duties.

As with any duty that is a condition of employment, the employee must receive training that permits the employee to be competent to provide the assigned services. And, if the administration of the medication would be considered a nursing task that must be delegated, the delegating registered nurse must authorize the delegation to the

Tools and Information for School Nurses, Parents/Guardians and School Staff - Frequently Asked Questions

employee in accordance with the rules governing such delegation.

20. What if a school staff person without a health care license is not willing to perform a health-related task to which he/she has been assigned?

As stated in question 19, unless a person has the performance of these tasks fairly listed as part of their job duties, they cannot be forced to perform the task. If there is no employee assigned to provide health care procedures, the district can attempt to elicit an employee who volunteers. A volunteer assignment is a better option anyway since an individual who is voluntarily performing a task is more likely to accept and execute the responsibility in a way that is safe and beneficial for a child. However, the inability to find a volunteer staff person to perform the procedure does not diminish the school district's responsibility to provide the health service.

21. If parents/guardians and family representatives are trained to do nursing procedures at home, can they train non-nurses to do them in the school setting?

Laws governing the practice of nursing have been written to protect the public. Procedures that are defined as nursing tasks, although performed routinely, are not innocuous, and require nursing knowledge, judgment and skill. Family members may provide home nursing care to family members and train others to provide that care in their own home. However, the ability to do this "practice of nursing" is not extended to the schools. Individuals who are employed in educational

settings and performing these procedures in the school must receive their training and supervision from a licensed health care provider.

22. What are the minimum criteria for considering a student to be "self-directed" in his or her personal health care needs?

Determination as to whether a student should be considered self-directed in their personal health care should be based on the student's cognitive, physical and/or emotional development rather than age or grade. Usually a student may be considered to be self-directed if he/she is consistently able to do all of the following:

- Identify the correct medication by name, color, or shape;
- Identify the purpose of the medication (e.g., to allow body to use food eaten);
- Determine that the correct dosage is being administered (e.g., one pill, 5 units);
- State the time the medication is needed during the school day (e.g., lunch time, before/after lunch, after finger-stick);
- Possess the physical dexterity to safely perform necessary procedures;
- Able to record the activity (medication, procedure) with sufficient detail;
- Describe what will happen if medication is not taken (e.g., unable to control blood sugar); and
- Refuse to take medication if student has any concerns about its appropriateness.

Student individualized health care plans should always address ways to make the student more independent in the management of their health needs. However, regardless of the student's ability to be self-directed, the school maintains the responsibility to monitor the health status of students.

Tools and Information for School Nurses, Parents/Guardians and School Staff - Frequently Asked Questions

23. What is the district's responsibility for ensuring that a school nurse has received appropriate training if he/she does not know how to perform certain procedures that a child will need? What is the nurse's responsibility?

It is the district school board's responsibility to ensure that all staff, including nursing staff, are adequately trained and have updated skills to perform their job-related duties. It is the registered nurse's professional responsibility to recognize if additional training or review is needed to perform a particular procedure and determine where the appropriate training can be obtained. Policies and procedures to ensure appropriate training and supervision for any individual who performs health-related services should be included in the school district's emergency nursing services plan.

24. Is additional funding available to schools for the provision of health services for students with disabilities?

A school may be eligible to receive federal Medicaid funds for skilled nursing services that are provided to Medicaid eligible students with disabilities receiving special education. To receive the reimbursement, nursing services must be listed as a "related service" in the student's individualized education plan (IEP). The school district would be reimbursed for any nursing-related procedure that must be done during the school day in order for the student to benefit from specially designed instruction.

25. Are all children with special health needs required to have an individualized health care plan (IHP)?

Although there is not a specific law that requires a plan to be written, preparing an IHP is a standard of professional nursing practice and is recommended for all students with health needs. An individualized health care plan, or IHP, is a plan of care for a student with health needs that require or may require an intervention while at school. The IHP is a communication tool that delineates what health services are required, who will perform them, and how and where they will be performed. An emergency plan is a more succinct plan that details what situation(s) is an emergency, and what needs to be done by whom.

An IHP is required and must be written if a school is eligible to receive reimbursement for skilled nursing services for Medicaid eligible disabled students. The IHP serves as the documentation for billing purposes.

26. What elements should be considered in developing a student's emergency plan?

The goal of an emergency plan should be to never have to use it. Each student situation must be examined individually. The critical elements include:

- what might happen that requires immediate action;
- what is the probability that it could happen;
- what action is required;
- what knowledge, skill, and attitude is required of someone to act – or more importantly, to prevent the emergency in the first place;
- is there a person with the required ability to act available;

Tools and Information for School Nurses, Parents/Guardians and School Staff - Frequently Asked Questions

- what is the availability, skill level, and response time of community emergency medical services;
- who has a need to know about the potential situation; and
- who will have the responsibility to act, including “back-up” people.

27. Who is responsible for supplying the equipment/supplies for students with diabetes?

In most circumstances, the family is responsible for providing any supplies and/or equipment for students who have diabetes. In some limited circumstances, it may become necessary for the district to provide the necessary equipment/supplies so that a student can benefit from his/her educational program, especially if a family is financially unable to provide them. Such a decision would be made by the student’s special education IEP team or 504 planning team.

28. Is a school district always obligated to accept and follow an order from a licensed health care provider?

Not in all circumstances. A licensed health care provider can direct the school to provide a medication and/or a health procedure, and in general, the school should comply. The directive must meet all the requirements for the task to be done at school, such as written instructions, necessary to allow the student to access education, etc. If, however, the school nurse or school physician advisor believe that the directive is not medically appropriate, the school should not follow the order unless or until it is legally determined to be safe and appropriate. In fact, if a Registered

Nurse believes that a medical directive is not safe or not appropriate, the nurse legally CANNOT comply with the order. If the nurse did comply, he or she could face disciplinary action by the Board of Nursing.

A licensed health care provider cannot direct the school in the provision of education or related services to education. The school district should certainly consider the directive in determining an appropriate educational program and the physician should be a member of the educational team making the determination. However, the school is not obligated to follow a non-health care directive. For example, if a physician directed a school district to provide homebound instruction because the student had limited strength, the education team would consider the request and supporting rationale. However, the school would not be obligated to provide homebound instruction if the student’s needs could be accommodated in a different way, such as shortened day, rest periods, etc. Likewise, if a health care provider indicated that a student should be allowed to self-administer a medication, other than an asthma inhaler, but the school believed it was not safe or appropriate, the school would not be obliged to follow that aspect of the medication order.



Tools and Information

for Teachers, Coaches, Administrators, School Staff
and Bus Drivers



Tools and Information - Chapter Guide

- Teachers/Coaches
- Administrators
- Food Service Personnel and Others
Providing Food
- Bus Drivers



Considerations for the Teacher/Coach

- Participate in the health care planning meeting if indicated.
- Understand basic information about diabetes.
- Understand the following in the health care plan:
 - signs and symptoms of low blood sugar for this student
 - how to prevent low blood sugar including your role & location of all instructions and supplies
 - how to treat low blood sugar early
 - how to respond to very low blood sugar with unconsciousness
 - how and when to access further emergency care
 - how to recognize signs and symptoms of high blood sugar and how to respond
 - how to implement food and snack requirements and routines related to a student's insulin administration method and schedule

- food and snack requirements and routines related to alterations in activity level (e.g., recess, gym class or sports)
- how to plan for everyday and “as needed” blood sugar monitoring
- plan and schedule for insulin administration
- how to maintain respect for privacy
- how to design and implement safety procedures (i.e., student should not be sent alone to rest room, office or health office if not feeling well)
- requirements and your role for special days (i.e. field trips including emergency contact information as required in Standard G [Administrative Rule P18.01(2)(g.), Emergency Nursing Services] of the Wisconsin Administrative Code
- how to obtain necessary supplies and training before the event
- how to communicate effectively with parents/guardians, school nurse, and other students



Actions for Administrators

Children with diabetes may be covered by the Individuals with Disabilities Education Act (IDEA) or Section 504 of the Rehabilitation Act of 1973. Children with diabetes should have a health care plan and as part of that plan consideration should be given to:

1. Self-monitoring or assistance with monitoring of blood sugar, including:
 - providing for training by qualified health personnel
 - making designated staff members available for tasks and training when needed
 - providing a safe and appropriate location for monitoring to take place

Tools and Information for Teachers, Coaches, Administrators, School Staff and Bus Drivers

2. Treatment of low blood sugars including emergency treatment of very low blood sugars, including:
 - providing for training by qualified health personnel
 - making appropriate staff members available for tasks and training
 - allowing student to carry necessary supplies when indicated
3. Self-administration or assistance with insulin if indicated, including:
 - providing for training by qualified health personnel
 - making appropriate staff members available for tasks and training
 - providing a safe and appropriate location for insulin administration to take place
4. Students should be allowed to fully participate in all activities with children who do not have diabetes.
5. Respect for student privacy must be maintained.
6. Support communication and participation in the health care plan by all appropriate school personnel and departments.

With prior planning, students with diabetes can have normal lifestyles and positive school experiences. The suggestions listed below have been developed to offer assistance and support to assure that students with diabetes feel safe and secure in your school. For more information on signs, symptoms and related activities see the appropriate sections of this document.



Information for Food Service Personnel and Others Providing Food

Students who have diabetes may purchase meals from the school menu, bring their own lunches to the cafeteria or may participate in school events where food is provided. These students shouldn't be singled out. There are ways to help them select the nutritious foods and make appropriate food choices.

Diabetes Meal Plan

Most children with diabetes follow meal plans. The most typical systems are Carbohydrate Counting, The Exchange System, or Calorie Points. Plans are prepared to meet the needs of each individual child. The type of meal plan used reflects the preference of the child's family and caregivers and the type of insulin administration system being used. As a rule, the meal plan will follow the Food Guide Pyramid. The major difference, however, is that cheeses are in the protein groups and the bottom of the Pyramid is all carbohydrates, starches, grains, fruits and other milk products.

A meal plan is a healthy pattern of eating consisting of:

- Ordinary foods
- Controlled amounts
- Regularly spaced intervals of eating related to insulin schedule

Tools and Information for Teachers, Coaches, Administrators, School Staff and Bus Drivers

Items to Remember

- Lunch menus may need some replacements if requested by parent/guardian.
 - carbohydrates may need to be added or deleted.
 - "sweet" desserts may need to be replaced with fruit.
- Most children with diabetes can make their own appropriate choice from a school lunch menu.
- Parents/guardians should review the school lunch menu in advance so they can help their child make appropriate choices.

Meal Timing

- It's very important that meals and snacks be eaten on time for students taking intermediate or long-acting insulin. Students with insulin pumps may have more flexibility about meal times. The result of delayed meals or snacks can be a low blood sugar reaction, especially if the student was very active at recess or in Physical Education class.
- Consider providing all the children in the class with a healthy snack at the same time. Snack suggestions include:

- Breadsticks	- Fruit sorbet
- Pretzels	- Fruit
- Bagels with low-fat cream cheese, muffins	- Fruit kabobs
- Graham crackers	- Fruit with plain yogurt
- Saltine crackers	- Popcorn
- Cereal	- Crackers with peanut butter or cheese
- Milk	
- Frozen yogurt	

- If meal times are delayed, glucose tablets or an extra snack should be available.
- Be familiar with the signs, symptoms, and treatment plan for low blood sugar emergencies for this student.

Parties and other Special Occasions Involving Food

- It is important for children with diabetes to participate in all celebrations and events.
- The child with diabetes may be able to have the same treats as the child who doesn't have diabetes provided the treat is figured into the diabetes meal plan.
- Be sure the child's parents/guardians are aware of any special events involving food and provide a substitute treat if necessary.



Actions for Bus Drivers

- Treat the child normally and help other children to do the same.
- Know what to do in an emergency, including how and when to access assistance for further emergency care.
- Learn to recognize the signs and symptoms of low and high blood sugar and be able to respond in accordance with the emergency plan. Always consider that hypoglycemia might be present even if the child denies this.
- Know that the end of the school day is often the time of low blood sugar episodes.
- Communicate diabetes care issues to substitute drivers and transportation assistants, requesting training for them by the designated health care professional if indicated.
- Allow the child to consume a snack on the bus if indicated in their plan. Keep a food or glucose supply, provided by the family, readily available on the bus.



Appendix



Appendix - Guide

- Blood Glucose Monitoring Record
- Emergency Information Form for Children with Special Needs – endorsed by the American College of Emergency Physicians, and the American Academy of Pediatrics
- Wisconsin Diabetes Control Program Resources
- Diabetes Internet Links
- Publications

BLOOD GLUCOSE MONITORING RECORD

Student Name _____ Date of Birth _____

Recording Month _____ School Year _____

[illegible]


*Injection site = **RL** (right leg), **LL** (left leg), **RA** (right arm), **LA** (left arm), **A** (abdomen)

Print Staff Name & Initials



Emergency Information Form for Children With Special Needs

Last name:

 American College of
Emergency Physicians®

American Academy
of Pediatrics



Date form
completed
By Whom

Revised
Revised

Initials
Initials

Name:		Birth date:	Nickname:
Home Address:		Home/Work Phone:	
Parent/Guardian:	Emergency Contact Names & Relationship:		
Signature/Consent*:			
Primary Language:	Phone Number(s):		
Physicians:			
Primary care physician:		Emergency Phone:	
		Fax:	
Current Specialty physician: Specialty:		Emergency Phone:	
		Fax:	
Current Specialty physician: Specialty:		Emergency Phone:	
		Fax:	
Anticipated Primary ED:		Pharmacy:	
Anticipated Tertiary Care Center:			

Diagnoses/Past Procedures/Physical Exam:	
1.	Baseline physical findings:
2.	
3.	Baseline vital signs:
4.	
Synopsis:	Baseline neurological status:

Diagnoses/Past Procedures/Physical Exam continued:

Medications:

Significant baseline ancillary findings (lab, x-ray, ECG):

1.

2.

3.

4.

5.

6.

Prostheses/Appliances/Advanced Technology Devices:

Management Data:

Allergies: Medications/Foods to be avoided

and why:

1.

2.

3.

Procedures to be avoided

and why:

1.

2.

3.

Immunizations

Dates

DPT

OPV

MMR

HIB

Dates

Hep B

Varicella

TB status

Other

Antibiotic prophylaxis:

Indication:

Medication and dose:

Common Presenting Problems/Findings With Specific Suggested Managements

Problem

Suggested Diagnostic Studies

Treatment Considerations

Comments on child, family, or other specific medical issues:

Physician/Provider Signature:

Print Name:

DIABETES CONTROL PROGRAM RESOURCES

The resource materials listed on this sheet are available free of charge to Wisconsin residents. To place an order, please indicate the quantity of each item and mail to the **Diabetes Control Program, Room 218, P O Box 2659, Madison, WI 53701-2659 or fax to (608) 266-8925**. The resource materials are also available at Diabetes Program web page: http://www.dhfs.state.wi.us/Health/diabetes/Prof_resources.htm

Name of Requester _____

Organization/Business Name _____

Street Address _____

City _____ State _____ Zip _____

Telephone No.
(Include Area Code) (____) _____ E-mail address _____

Title	Type	Language	Quantity
Wisconsin Diabetes Mellitus Care Guidelines	Book – Health Care Professionals	English	
Diabetes Resource Guide	Book – Health Care Professionals	English	
2000 WI Burden of Diabetes (specify counties desired)	2 sided Sheet – Health Care Professionals	English	
Children with Diabetes, A Resource Guide for Wisconsin Schools and Families	Book – Health Care Professionals and Consumers	English	
Disposing of Household Sharps	Pamphlet – Consumer	English	
Patient Wallet Cards	Cards – Consumer	English Spanish Hmong	
Take Control of Your Diabetes	Pamphlet – Consumer	English Spanish	

Note: National Diabetes Education Program (NDEP) has a number of tools including: Control Your Diabetes for Life Campaign Guide for Partners, A Diabetes Community Partnership Guide and Making a Difference: The Business Community Takes on Diabetes. You can order or download from the NDEP website:
<http://ndep.nih.gov>

Resources

or Additional Assistance - Control Program



Wisconsin Diabetes Control Program Resources

American Diabetes Association

1701 North Beauregard
Alexandria, VA 22311
1-800-DIABETES
Website: <http://www.diabetes.org>

School Curriculum

Diabetes and Children, Compendium of Health Lessons on
Diabetes, Nutrition, & Physical Activity for Grades K-6.

Contact:

The National Center for Health Education
(212) 334-9470
Email: nche@nche.org
Website: <http://www.nche.org>

Fit, Healthy, and Ready to Learn

Part 1: Physical Activity, Healthy Eating, and Tobacco-Use
Prevention - A School Health Policy Guide

Contact:

National Association of State Boards of Education
277 South Washington Street, Suite 100
Alexandria, VA 22314
(703) 684-4000
Email: boards@nasbe.org
Website: <http://www.nasbe.org>

Changing the Scene: Improving the School Nutrition Environment Kit

Contact:

Team Nutrition, Food and Nutrition Service
US Department of Agriculture
3101 Park Center Drive, Room 101
Alexandria, VA 22302
(703) 305-1624
Website: <http://www.fns.usda.gov/tn/>

P.E.D.S. – Pediatric Education for Diabetes in Schools

A Curriculum for Diabetes Care in Schools
National P.E.D.S. Trainer's Binder (teaching curriculum
and presentation materials)

Contact:

PADRE Foundation
455 South Main Street
Orange, CA 92868
(714) 532-8330
Website: <http://www.pedsonline.org>

ANTES, Acanthosis Nigricans - The Education and Screening Project Resource Handbook;

Developed by the University of Texas System, Texas-
Mexico Border Health Coordination Office; provides
education and suggested interventions on acanthosis
nigricans and other obesity-related conditions to assist
health care professionals, school administrators, and
parents in enhancing the health status of children.

Contact:

Paul Villas or Doreen Garza at (956) 381-3687
Email: TMBHCO@PANAM.EDU

5 A Day Power Play!

The California Children 5 a Day Power Play!

Campaign directed by the California Department of
Health Services and the Public Health Institute; offers
materials for the school nurse, 4th & 5th grader teach-
ers, food service personnel, and other interested staff
to raise awareness of the health benefits of eating fruits
and vegetables.

Contact: (916) 323-0594 or (888) EAT-FIVE

Website: <http://www.dhs.ca.gov/cpns/>

Food on the Run

A high school-based program to promote healthy eating
and physical activity options.

Contact:

California Project LEAN
The Department of Health Services
(916) 323-4742
Website: <http://www.californiaprojectlean.org>

Expanded Food and Nutrition Education Programs (EFNEP)

Youth programs for schools, child-care facilities, and sum-
mer day camps that offer classes, workshops, newslet-
ters, and personalized counseling for low income com-
munities to improve dietary habits.

Contact:

The University of California Cooperative Extension
(714) 708-1606
Email: ceorange@ucdavis.edu

Guidelines for School Healthy Programs to Promote Lifelong Healthy Eating and Physical Activity

Contact:

Centers for Disease Control & Prevention
Div. of Adolescent & School Health
(779) 488-3168
Website: <http://www.cdc.gov/nccdphp/dash/healthtopics/nutrition/guidelines/index.html>

Food and Activity Pyramids

Contact:

The Park Nicollet Health Source
(800) 372-7776

Resources or Additional Assistance - Internet

Wisconsin Coalition for Advocacy

16 North Carroll Street
Suite 400
Madison, WI 53703
(608) 267-0214

National Information Center for Children and Youth with Disabilities

PO Box 1492
Washington, DC 20013-1492
1-800-695-0285, fax: (202) 884-8441
Email: nichcy@aed.org
Website: <http://www.nichcy.org>

National Diabetes Information Clearing House

1 Information Way
Bethesda, MD 20892-3560
1-800-860-8747, fax: (301) 907-8906
Email: ndic@info.niddk.nih.gov
Website: www.niddk.nih.gov



Diabetes Internet Links

Wisconsin Diabetes Control Program

Diabetes resources
<http://www.dhfs.state.wi.us/health/diabetes/index.htm>

American Association of Diabetes Educators

Professional organization for diabetes educators
<http://www.aadenet.org>

American Diabetes Association

An organization devoted to diabetes cures & cares
<http://www.diabetes.org>

American Dietetic Association

Nutritional information
<http://www.eatright.org>

American Heart Association in Wisconsin

An organization devoted to fighting heart disease & stroke
<http://www.americanheart.org>

American Heart Association—Just Move

Information on physical activity
<http://www.justmove.org/home.cfm>

Children with Diabetes

The online community kids and families with diabetes
<http://www.childrenwithdiabetes.com>

Children with Special Health Care Needs Program

A Wisconsin state program that assists children
http://www.dhfs.state.wi.us/DPH_BFCH/cshcn/index.htm

Centers for Disease Control (CDC) Division of Diabetes Translation

Diabetes and public health resource
<http://www.cdc.gov/diabetes/>

Centers for Disease Control (CDC)—Physical Activity and Nutrition Information

Resource for physical activity and nutrition information
http://www.cdc.gov/nccdphp/bb_nutrition/index.htm

Diabetes Exercise and Sports Association (DESA)

Resource for individuals interested in fitness activities
<http://www.diabetes-exercise.org>

Dietary Guidelines for Americans

US Depts. Of Health & Human Services and Agriculture
Nutrition information
<http://www.health.gov/dietaryguidelines>

Hadley School for the Blind

Tuition-free, distance education for blind or visually
impaired persons, family members and professionals
<http://www.hadley-school.org>
1-800-323-4238

Indian Health Service (IHS) National Diabetes Program

A federal health program for American Indians and
Alaskan Natives
<http://www.ihs.gov/MedicalPrograms/Diabetes/>

International Diabetes Center (IDC)

Diabetes care and research information
<http://www.idcdiabetes.org>

Joslin Diabetes Center

Diabetes care and research information
<http://www.joslin.harvard.edu/>

Juvenile Diabetes Research Foundation (JDRF) International

An organization devoted to diabetes cures & cares
<http://www.jdrf.org>

Lighthouse International

Information for individuals who are visually impaired
<http://www.lighthouse.org>

Lower Extremity Amputation Prevention Program

A comprehensive program to prevent lower extremity
amputations
<http://www.bphc.hrsa.gov/leap/>

MUMS: National Parent to Parent Network

A national parent-to-parent network for parents or care
providers of a child with any disability
<http://www.netnet.net/mums>

Resources

or Additional Assistance - Internet

National Diabetes Education Program (NDEP)

Diabetes information, awareness campaigns and programs
<http://ndep.nih.gov>

National Diabetes Information Clearinghouse

Patient education to statistical data
<http://www.niddk.nih.gov/health/diabetes/ndic.htm>

NEI-National Eye Health Education Program

Public and professional education programs on eye health
<http://www.nei.nih.gov/nehep>

National Heart, Lung, and Blood Institute (NHLBI) Information Center

Information on heart disease
<http://www.nhlbi.nih.gov/index.htm>

National Kidney and Urologic Diseases Information Clearinghouse (NKUDIC)

Information on kidney disease
<http://www.niddk.nih.gov/health/kidney/kidney.htm>

National Kidney Foundation

An organization devoted to kidney disease cures & cares
<http://www.kidney.org>

National Kidney Foundation of Wisconsin, Inc.

An organization devoted to kidney disease cures & cares
<http://www.kidneywi.org>

Office of Minority Health (OMH) Resource Center

Information on a variety of health topics and minority health issues
<http://www.omhrc.gov>

Sharps Disposal

Information on how and where to properly dispose of sharps
<http://www.dnr.state.wi.us/org/aw/wm/medinf/>

Weight-control Information Network (WIN)

Nutrition and weight control information & programs
<http://www.niddk.nih.gov/health/nutrit/nutrit.htm>

Wisconsin Council of the Blind

Private, not-for-profit agency that provides services to the blind and visually impaired
<http://www.wcblind.org>

Wisconsin Department of Public Instruction

School Nursing and Health Services: A Resource and Planning Guide
Wisconsin Department of Public Instruction
1-800-243-8782
<http://www.dpi.state.wi.us/dpi/dltcl/eis/pubsales/index.htm>

Wisconsin Department of Public Instruction Web sites

General web site: www.dpi.state.wi.us
Parent's page -
<http://www.dpi.state.wi.us/dpi/parentpg.html>

Special education -

<http://www.dpi.state.wi.us/dpi/dlsea/een/index.html>

School nursing/health services -

<http://www.dpi.state.wi.us/dpi/dlsea/sspw/index.html>

Publications -

<http://www.dpi.state.wi.us/dpi/dltcl/eis/pubsales/index.html>

Wisconsin Lions Foundation

A charitable, non-profit Wisconsin corporation with a variety of programs
<http://www.wlf.info>

Wisconsin Primary Health Care Association

Primary health care resources
<http://www.wphca.org>

The Wound Care Institute, Inc.

Information on wound healing and diabetic foot disease
<http://woundcare.org>

Financial Resources Internet Links

2002 Directory of Prescription Drug Patient Assistant Programs

Listing of programs that provide financial assistance for the purchase of medications
<http://www.phrma.org/> or <http://www.needymeds.com>

Advocacy & Benefits Counseling for Health, Inc. (ABC)

A nonprofit law firm dedicated to ensuring health care access for children and families
<http://www.safetyweb.org>

BadgerCare

Wisconsin's program to provide health insurance for uninsured families
<http://www.dhfs.state.wi.us/badgercare>

Wisconsin Medicaid

Public health insurance for individuals who meet eligibility requirements
<http://www.dhfs.state.wi.us/Medicaid/index.htm>

Health Insurance Risk Sharing Plan (HIRSP)

Offers health insurance to Wisconsin residents who either are unable to find adequate health insurance coverage in the private market due to their medical conditions or who have lost their employer-sponsored group health insurance
<http://www.dhfs.state.wi.us/hirsp/>

Wisconsin Chronic Disease Program

Offers assistance to Wisconsin residents with chronic renal disease
<http://www.dhfs.state.wi.us/wcdp/index.htm>

R Resources

or Additional Assistance - Publications



Publications

The ADA Guide to Healthy Restaurant Eating

Hope S. Warshaw, MMS, RD, CDE

Baby-Sitters Club Stacey McGill, Super Sitter

Ann Martin

Baby-Sitters Club Stacey's Emergency

Ann M. Martin

Baby-Sitters Club Truth About Stacey

Ann M. Martin

Commonsense Guide to Weight Loss

Barbara Caleen Hansen, PhD. and Shauna Roberts, PhD.

Complete Weight Loss Workbook

Judith Wylie-Rosett, EdD, RD; Charles Swencionis, PhD;
Arlene Caban, BS; Allison Friedler, BS; and Nicole
Schaffer, MA

The Diabetes Advisor

American Diabetes Association,
P.O. Box 732, Mt. Morris, IL 61054-8312

Diabetes: A Guide to Living Well (Updated and Revised Edition)

Gary Arsham, M.D., Ph.D. and Ernest Lowe

Diabetes Forecast

American Diabetes Association,
P.O. Box 363, Mt. Morris, IL 61054-8303

Diabetes Interview

P.O. Box 469050, Escondido, CA 92046

Diabetes Self-Management

P.O. Box 51125, Boulder CO 80323-1125

The Diabetes Snack Munch Nibble Nosh Book

Ruth Glick

The Diabetes Sports & Exercise Book

Claudia Graham, June Bierman and Barbara Toohey

Diabetic Low-Fat & No-Fat Meals in Minutes!

M.J. Smith, R.D.

Even Little Kids Get Diabetes

Connie White Pirner;

Illustrated by Nadine Bernard Wescott

Everyone Likes to Eat: How Children Can Eat Most of the Foods They Enjoy and Still Take Care of Their Diabetes

Hugo J. Holleroth, Ed. and Debra Kaplan, R.D., M.S., with
Anne Marie Bertollie, M.B., R.D., C.D.E.

Exchange It: An Aid to Diet Control in Diabetes

Rita Clark, L.P.N.

In Control: A Guide For Teens With Diabetes

Jean Betschart, M.S.N., R.N., C.D.E. and Susan Thom,
R.D., L.D., C.D.E.

It's Time to Learn About Diabetes

Jean Betschart, M.S.N., R.N., C.D.E

The Kids, Food & Diabetes Family Cookbook

Gloria Loring

A Magic Ride in Foozbah-Land:

An Inside Look at Diabetes

Jean Betschart, M.N., R.N., C.D.E.; Illus. by Jackie Urbanovic

Managing Your Child's Diabetes

Robert W. Johnson, IV, Sale Johnson, Casey Johnson
and Susan Kleinman

Month of Meals: Classic Cooking

Month of Meals: Meals in Minutes - Recipes for Diabetics

Billie Little

My Personal Health Diary-Juvenile

Diabetes Foundation

My Sister Rose Has Diabetes

Monica Driscoll Beatty; Illustrated by Kathy Parkinson

Parenting a Diabetic Child

Gloria Loring

Psyching Out Diabetes: A Positive Approach to Your Negative Emotions

Richard R. Rubin, June Bierman and Barbara Toohey

Rufus Comes Home

Rufus, The Bear With Diabetes

Kim Gosselin

Resources or Additional Assistance - Publications

School Nursing and Health Services: A Resource and Planning Guide

Wisconsin Department of Public Instruction

Sugar Was My Best Food: Diabetes and Me

Carol Antoinette Peacock, Adair Gregory and
Kyle Carney Gregory; Illustrated by Mary Jones

Take Charge of Your Diabetes

Department of Health and Human Services
Centers for Disease Control and Prevention
National Center for Chronic Disease Prevention and
Health Promotion

Taking Diabetes To School

Kim Gosselin

The Uncomplicated Guide to Diabetes Complications

Marvin Levin, MD and Michael Pfeifer, MD

Voice of the Diabetic

811 Cherry Street, Suite 309, Columbia, Missouri 65201

When Diabetes Hits Home

Wendy Satin Rapaport, LCSW, PsyD

The Children With Diabetes, A Resource Guide for Wisconsin Schools and Families is the product of extraordinary cooperation among diverse school professionals and organizations, health care providers, non profit organizations and public health staff. PPH 43063 (12/02)

For questions or to obtain copies of this manual, contact:

The Wisconsin Diabetes Control Program
Bureau of Chronic Disease Prevention & Health Promotion
Division of Public Health
Department of Health and Family Services
PO Box 2659
Madison, WI 53701-2659
608-261-6855
Fax: 608-266-8925
e-mail: wingja@dhfs.state.wi.us
or visit web site: <http://www.dhfs.state.wi.us/health/diabetes>